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CLINICAL MEDICINE

LEADING ARTICLES

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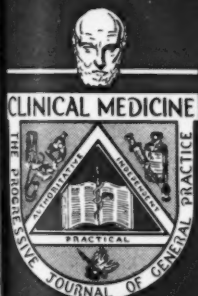
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REFERENCES: (1) Richards, R. K., and Everett, G. M. (1944), *Analgesic and Anticonvulsive Properties of 3,5,5-Trimethyloxazolidine-*

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VOLUME 53

APRIL, 1946

NUMBER 4

Anesthetic Mortality and Morbidity: Causes and Avoidance

The Place of the General Practitioner in Anesthesia

By JOHN ELAM, M.D.,* *New Barnet, England*

This is a review of the ideas that the author has formed in 21 years of practice as a general practitioner anesthetist. He gives 2,000 anesthetics a year but states that general practice makes up the bulk of his work. His balanced viewpoint will be appreciated by other physicians who wish to improve anesthesia in their own localities.

ALL interested in the progress of anesthesia would like to believe that we are advancing in our use of new anesthetic drugs and improving our methods of using established drugs, in a manner comparable to those advances in other branches of medicine.

Yet perhaps the picture of success which we would paint, is not quite a true representation of what we see, if we have eyes to see. Anesthetic mortality and morbidity continues to rise, and the statistical figures are gravely disturbing.

To explain this rising mortality it is tempting to argue that far more opera-

tions are performed to-day than was formerly the case, and that many patients whose condition would at one time have absolutely prohibited operation, are given a chance of survival. I do not believe that this explanation is a true one.

My father was a surgeon of experience and I know well that he performed many serious operations under conditions which today would have been considered quite hopeless. In his day, for example, it was not uncommon for a surgeon to excise a tongue, under chloroform anesthesia administered through a tube fixed in the corner of the mouth.

There was no endotracheal tube to provide an unimpeded airway, and no mechanical sucker to remove blood from the area of operation. This is only one example of the difficulties which our fathers faced and overcame.

Many desperate operations, which were not uncommonly performed thirty-five years ago, have now been superseded by other methods of treatment.

Abdominal emergencies, such as perforated gastric ulcer, and intestinal obstruction come to operation to-day far

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earlier than was usually the case in former times.

Let us face the fact that "modern anesthesia" while more comfortable for the patient, and giving greater facilities to the surgeon, yet carries with it to-day greater danger to life. What evidence have we that this is the case?

In 1921, 347 deaths associated with the administration of an anesthetic were reported to the Coroner (England); in 1931—723, in 1933—760, in 1941—835, and in 1943—840.

Barbiturate Deaths

In 1941, anesthetic deaths associated with the barbiturates exceeded those associated with the use of chloroform (in England), and such deaths show a marked increase in 1944—61 in 1941; 73 in 1944).

In an editorial in *Current Researches in Anesthesia and Analgesia*, for Sept.—Oct., 1944, we read that there have been six times as many deaths under intravenous barbiturate anesthesia in the U. S. Army, as under any other anesthetic.

Cyclopropane Dangers

In the same journal for March-April, 1944, there is a revealing sentence in an article on "Nitrous Oxide in Army Hospitals" by Major Kenneth C. McCarthy, Louisville. He writes "The use of cyclopropane is expressly prohibited."

In the *American Journal of Obstetrics and Gynecology*, Stanton Belinkoff (48: 1.109, July, 1944), reports two deaths under cyclopropane.

Was Flagg wrong after all when he warned us to regard Cyclopropane as chloroform dispensed in a gaseous form? (P. J. Flagg—*The Art of Anesthesia*, 1939).

Spinal Analgesia

The modern technic of spinal analgesia has produced some sad fatalities too. It is in association with spinal analgesia that we meet with "anesthetic cripples."

Grave disquiet was caused recently when a question was asked in Parliament concerning the death of a young soldier from paralysis and toxemia, several months after the administration of a spinal anesthetic, for the performance of an operation for the cure of a simple hernia, and this is not a rare and unusual case.

Causes

I believe we can discover the cause,

and can find how anesthetic mortality and morbidity can be materially reduced.

I am convinced our troubles can be classified under five headings:

1. The teaching of the art and science of anesthesia to those medical students who are to become: (a) General practitioners. (b) Anesthetic specialists.
2. The economic aspect of anesthesia.
3. The present-day tendency to sacrifice safety for comfort.
4. Over-enthusiasm for new and imperfectly understood anesthetic drugs and methods.
5. Failure to appreciate the vital importance which the skill and ability of the individual plays in all medical science.

Presurgical Deaths

A high proportion of anesthetic deaths occur during, or immediately before, relatively simple or straightforward operations.

In the *British Journal of Anesthesia* for April, 1939, Ronald Jarman discusses Death under anesthesia very exhaustively. Yet he is compelled to admit: "Up to the present moment there is not an anesthetic body that has ever attempted to record anesthetic deaths in such a way that the causes may be discovered and consequently classified."

Type of Anesthetist

Jarman found however on investigating the reports on a great number of anesthetic deaths, that about 80 per cent occurred when a newly qualified house officer was in charge of the administration, 12 per cent when the general practitioner, who regularly gives anesthetics, was in charge, and 8 per cent when the professional anesthetist was in charge.

Dr. Paul M. Wood, of New York City, summed it up by expressing the opinion that seldom is the agent any more at fault than the method or skill of the anesthetist. Given properly trained and qualified anesthetists, morbidity and mortality fall, regardless of the agent, technic or the patient's condition.

The teaching of the Wisconsin school is, that if we wish to improve our results we must pay more attention to administrator rather than to the drug administered. It is reasonable to suppose that modern anesthetic drugs and modern anesthetic techniques require great skill and experience on the

part of the administrator. Too often this skill and experience are not forthcoming.

Defective Teaching

Is the teaching of anesthesia in our teaching schools all that it should be? I think not. One grave error is that far too often surgeons and anesthetists at the major teaching hospitals think only of "metropolitan medicine," and the needs of those men and women who are going to practice in rural areas are forgotten.

Here is an example, a personal experience, to demonstrate the difficulties of the rural practitioner.

A delightful old gentleman called on me to give an anesthetic for a difficult forceps delivery, in a country cottage some miles from my home. The cottage was right in the middle of fields, far from the high road and, as it was winter, and the fields were soft, I could not drive my car to anywhere near the cottage. I had in my car a gas and oxygen apparatus, but I just could not carry it to the scene of action.

There was a large fire in the room where the patient was being confined and so chloroform was the only anesthetic possible. I confessed that I was not a chloroform expert. My old friend smiled gently and then said that, just to show me, he would give chloroform and that I should conduct the delivery with the forceps. He gave his chloroform, with most wonderful skill.

At the end of the operation I was wondering why anyone ever used anything but chloroform in midwifery and wondered what the cyclopropane enthusiasts would have done in that country cottage, where I was taught how to use chloroform as Simpson used it nearly one hundred years ago.

The country general practitioner can still teach us quite a lot if we are ready to learn.

Surgeons and physicians on the staffs of our teaching hospitals 35-40 years ago had a far greater knowledge and understanding of the needs and the difficulties of the general practitioner, and they took the trouble to teach their students how to become general clinicians. After all, most medical students come to teaching hospitals to learn to be doctors, that is, general practitioners of medicine. Young physicians need to learn how to use drugs and methods of administration which are applicable to the practice of medicine all over the world, not in the great cities only. That

means that they must learn how to administer ether and chloroform, especially the latter.

There are great difficulties in obtaining this practical experience in simple methods with simple drugs, because the great teaching hospitals are also great centers of research, where new methods and new drugs are investigated.

Anesthesia cannot be learned from books, but the student must actually administer the anesthetic, to become proficient. Yet many patients admitted to teaching hospitals are seriously ill, and have to undergo very difficult operations. Such patients do not constitute suitable material on which the student can practice simple ways of giving ether or chloroform.

The only solution of this difficulty is to arrange for students to attend at the minor hospitals where they would have an opportunity of learning how to give, say, open drip ether for straightforward operations.

Economic Aspects

Little encouragement is given to-day to the student or the newly qualified practitioner to specialize in the art and science of anesthesia. The general public is convinced that any M.D. is a competent anesthetist, and nothing will persuade the average patient that any special knowledge and experience is required on the part of the anesthetist. Thus there exists a very general reluctance to pay fees such as would encourage a young practitioner to serve that long apprenticeship which skilled anesthesia demands.

Safety versus Comfort

One notices an unfortunate tendency of recent years to sacrifice safety for comfort, with inevitable, and rather sad, results, especially in maternity services.

Montgomery (*J.A.M.A.* May, 1937), in his investigation in Philadelphia, showed that many maternal deaths were in reality attributable to this very cause. He found that no small proportion of such deaths were directly due to errors in judgment in selection and administration of an anesthetic.

There is no drug or combination of drugs which will render labour free from all discomfort except at the cost of many dead and damaged mothers and babies. Neither can we with safety avoid all discomfort in the operations of surgery.

Ether Advantages

Ether has to some extent been super-

seded by other less safe anesthetics, in general surgery, because of the rather unpleasant induction and of the vomiting which occurs after its use, and in our desire to avoid the very real distress caused by post-anesthetic vomiting we not infrequently adopt methods of administration which are not really suitable for the particular operation. Ether anesthesia has many advantages for both patient and surgeon, and there are worse things than post-operative vomiting.

Flagg (Art of Anesthesia, 1930) calls attention to this particular danger in modern anesthetic practice. "Recent advances in the technic of administering ether and other general anesthetics, reduce the occasions where regional and spinal methods are positively indicated."

"The most ardent advocates of local methods of anesthesia acknowledge that local anesthesia does not reduce the incidence of post-operative pneumonia, that a certain percentage of cases cannot be properly anesthetised; . . . and that extremely serious post-operative complications, never seen in general anesthesia, are to be reckoned with." . . . For all-round use ether remains pre-eminent. . . . Instead of delivering a safe, efficient and agreeable anesthetic, the anesthetist often provides an anesthetic which is agreeable, safe and efficient. . . . The surgical procedure is hampered in order that the anesthetic may be pleasant. . . . It would be safer and wiser, if new agents were allowed to ripen on the tree of universal experience, demonstrating by their wholesome maturity their intrinsic worth instead of being plucked prematurely and sold for the honour of discovery, and for profit. . . . No agent, other than ether, should be used by the inexperienced."

It seems to me that Flagg in these few sentences has shown us the principal faults in present-day anesthetic practice. Far too often new drugs and new methods of administration are discovered and used with limited success by highly experienced anesthetists, who are expert in getting themselves out of trouble.

Because of their pleasantness and of their novelty, these new drugs and methods are used prematurely by practitioners whose experience and skill do not warrant their use.

The most dangerous drug used skillfully by skilled men is far safer than

the safest drug used unskillfully by the unskilled. I have known experienced anesthetists who obtained outstandingly successful results with spinal analgesia and yet could never manage an open drip ether anesthesia well.

To be a successful anesthetist with any drug or any method of administration, the practitioner must be prepared to serve a long apprenticeship to his art and give many many hours to the close study of his subject. There is, and there can be, no other way.

Summary

To-day, in our teaching hospitals, the methods of producing anesthesia and analgesia are outside the province of the student and the newly qualified house officer, because of their complexity and danger. Simple methods of administration with safe drugs are no longer in vogue in these hospitals.

To become proficient in the methods of administration which the modern surgeon demands for his work, the student must serve the long apprenticeship, which has become economically impractical.

However altruistic the young practitioner may be, and his idealism today is not something which should be lightly regarded, he yet has to make his way in the world and meet his financial obligations. For most medical practitioners the practice of anesthesia simply cannot be made to pay.

If only the public could be made to understand that, if they are not willing to pay in cash for good anesthesia, they are going to pay with their lives for indifferent work. I would then submit that our difficulties are not insuperable and that with good will and clear understanding we can take the necessary steps to cause the ever-rising tide of anesthetic mortality and morbidity to recede.

In our teaching schools, students must be given, in either major or minor hospitals, an opportunity to become proficient in simple ways of administering an anesthetic such as would be suitable for the operations commonly met with in general practice, all over the world.

All necessary steps must be taken to make the reward and status of the anesthetic specialist such as will encourage our young people to serve the long apprenticeship and give the long hours of study which such specialism requires.

48 Station Road

High Blood Pressure: Clinical Importance of Ophthalmoscopy

By MORTIMER MANN, M.D.,* and ROBERT D. TAYLOR, M.D.,
Indianapolis, Indiana

Most patients wishing to have their hypertension evaluated, have not had an ophthalmoscopic examination, yet fundus findings have proved to be a very valuable clinical sign.

Dr. R. Taylor and Dr. Mann have felt that this knowledge should be brought to the attention of the general practitioner and here the subject is presented in a clear and simple manner.

EXAMINATION of the ocular fundus offers the only opportunity for direct observation of the arterioles and the effects of their disease on a highly-specialized structure, the retina. The retinal vessels are microscopic in size, but are easily seen with an ophthalmoscope because the media of the eye magnify the image about fifteen times. These vessels, beyond the primary branches, are classified as arterioles. They differ from arterioles in other parts of the body in that the thickness of the vessel wall is only one-tenth the diameter of the lumen. They receive additional support from the intraocular pressure. Changes in the retinal arterioles indicate a similar change in arterioles throughout the body although there may be a difference in degree.

Before considering these changes it must be emphasized that they are independent of any process occurring in larger arteries, such as the aorta, coronary, or cerebral vessels. Sclerosis of these larger arteries does not develop as a result of hypertension, but occurs just as frequently in people with normal or low blood pressure, and may be absent in those with high blood pressure. The principal changes in appearance of the retinal arterioles consist of constriction and sclerosis. Vasospasm occurs first, and if it persists sclerosis always follows.

Vasospasm

In early hypertension vasospasm is often difficult to visualize, and in the "neurogenic" stages may be absent for several years. However, in true progressive essential hypertension it eventually

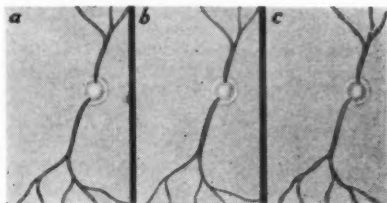


Fig. 1. Arteriolar spasm: a is normal; b is the generalized type in which the arterioles are uniformly narrowed; and c is the segmental type of spasm.

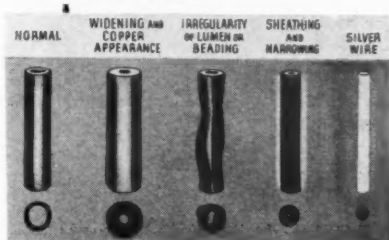


Fig. 2. Principal changes observed in retinal arterioles as a result of sclerosis, and effect on vessel wall and lumen.

appears. The first manifestation is usually a change in the normal A-V (arterio-venous) ratio of 2:3. As a result of constriction the veins may appear two to three times the size of their accompanying arteries, and it is not possible to follow the arterioles to the periphery of the fundus (Fig. 1-b). In other instances a segment of a vessel may appear spastic, so that the change in the caliber of the narrowed portion can be easily observed (Fig. 1-c). These abnormalities vary in degree from patient to patient, but whenever they are persistently present arteriolar sclerosis will appear.

The first ophthalmoscopic sign of sclerosis is a widening of the light reflex, which is probably due to an alteration in the transparency of the vessel wall as a result of intimal hyalinization and degeneration of the media. This early change may give the vessel a copper-wire appearance (Fig. 2). As the degeneration progresses, proliferation

*From the Indianapolis City Hospital

occurs in the retina, making the lumen of the vessel appear irregular. This is often referred to as beading (Fig. 2).

Another manifestation of sclerosis is sheathing, which is seen as a white line on either side of the vessel wall (Fig. 2). Exactly what this represents is not known. It is believed by some to be a perivascular fibrosis. If sclerosis continues the lumen becomes almost obliterated, so that the vessel wall will reflect light homogenously, giving the appearance of a white streak. There is no evidence of a blood column, and the arteriole resembles a silver wire. (Fig. 2).

Associated with thickening and sclerosis of arterioles is the appearance of crossing phenomena. Friedenwald has shown histologically that the vein and artery are enclosed in a common adventitia at their intersection. He has also demonstrated that the intima of the vein is separated from the lumen of the artery only by the media of the artery. As a result of this intimate relationship sclerosis of the artery causes the soft vein to become displaced and compressed. This appears in the fundus as a tapering of the vein as it approaches the artery (Fig. 3-b) or a complete disappearance of a segment of the vein (Fig. 3-c & d). Where the vein crosses in front of the artery it is bent forward and appears to bridge the artery (Fig. 3-c & f). When only minimal changes can be observed in the arterioles there may be evidence of venous compression. In the presence of definite arteriosclerosis some evidence of A-V compression is usually noted.

Sclerosis tends to cause a narrowing of the arterioles which alters the normal A-V ratio from 2:3 to 1:3, or more. Thus it is very important to note the size relationship between artery and vein. In addition to the changes observed in the larger arterioles the macular twigs may have a corkscrew appearance. This may be difficult to evaluate. However, when present it is further evidence of hypertensive vascular disease.

Summary

Early visible arteriolar changes are first evident in the light reflex which becomes widened and takes a metallic luster. Later the vessels become sheathed and may appear as silver wires. The veins become involved in the sclerosing process at their intersection with arteries. The arterioles may be more tortuous, particularly in the

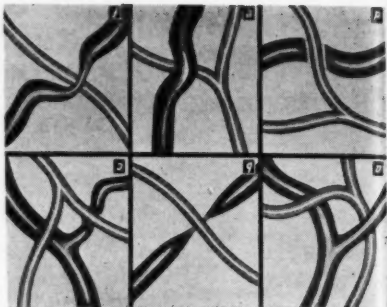


Fig. 3. Effect of arteriosclerosis at intersection of artery and vein—a is normal.

macular region, and the entire arterial tree may appear attenuated. As formerly stated, spasm usually precedes or accompanies these changes. Regardless of the etiology of hypertension, its effect on blood vessels is the same; and when changes can be observed with the ophthalmoscope similar lesions may be assumed to involve most other organs in some degree.

Interpretation of Fundus Findings

Hypertension is a disease which primarily effects arterioles. By examining the retinal vessels, an index of the amount of vascular change elsewhere in the body can be had. It is important to observe not only the presence of arteriosclerosis, but also the degree. If retinopathy is not present, the prognosis for a patient with essential hypertension is usually good. However, when hemorrhages or exudates appear the prognosis immediately becomes poor. These lesions indicate extensive vascular damage even though it is not always apparent in the retinal vessels. The appearance of papilloedema is considered the gravest sign, since patients with this finding have malignant hypertension.

Observation of two hundred hypertensives for five years or more showed a definite correlation between fundus findings and life expectancy (Fig. 4).

Group I included those patients who showed little or no vascular change (Fig. 4).

Group II was made up of those patients whose retinal vessels were definitely sclerotic and who usually show some degree of vasospasm. No retinopathy was present. Arteriovenous crossing phenomena were observed, and the A-V ratio is greater than 2:3 (Fig. 5).

Group III. These patients showed hem-

orrhages, exudates, or both, in addition to vasospasm and sclerosis (Fig. 6).

Group IV. Classification into this group depended upon the presence of papilloedema. The other vascular and retinal abnormalities were almost always present, but occasionally only papilloedema and vasospasm were seen (Fig. 7).

323 Hume Mansur Bldg.

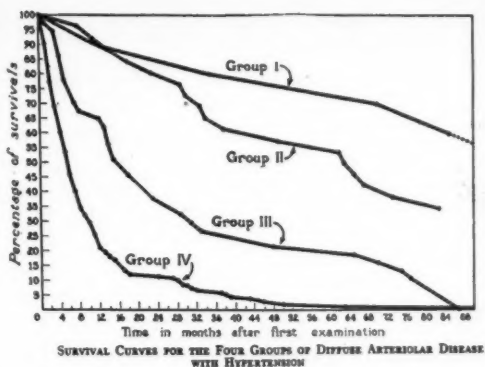


Fig. 4. Self explanatory.

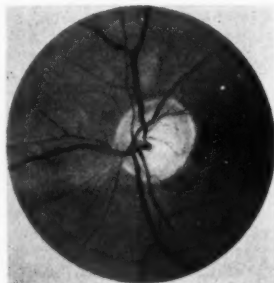


Fig. 5. Forty-six-year-old female who had had hypertension for three years. Blood pressure averaged 178/110; specific gravity of urine 1.029. Vessels show minimal changes consisting of a broadening of light reflex, and early venous compression by arteries. Artery size to vein size ratio is still normal.

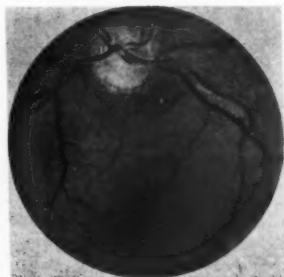


Fig. 6. Sixty-one-year-old male who had had hypertension for eleven years. Blood pressure 211/110. Urine specific gravity 1.016. Arterioles show beading and marked narrowing as a result of sclerosis and spasm. Artery-vein ratio is 1:3.

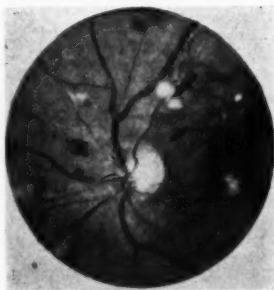


Fig. 7. Thirty-nine-year-old male who was told two years earlier that his blood pressure was elevated. Averaged 200/125. Urine specific gravity 1.016. Most significant findings are the numerous flame-shaped hemorrhages and fresh exudates. Vasospasm is also present.

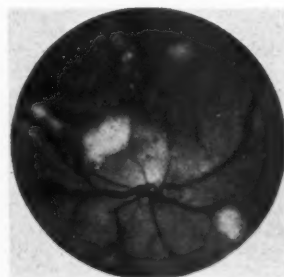


Fig. 8. Fifty-six-year-old male who discovered he had hypertension several months before admission. Blood pressure averaged 223/142; specific gravity of urine was 1.015. Fundus shows the typical findings of malignant hypertension—papilloedema, hemorrhages and exudates. The vessels are markedly spastic.

Functional Neurosis: The Crux of the Physician

(PSYCHOSOMATIC MEDICINE)

By LYDIA SICHER, M.D., Ph.D., Los Angeles, California

WAR, by its very existence, exposes the lack or defectiveness of social adjustment of individuals and peoples more than any other crisis in life. Not only because it is in itself the most obvious proof of man's neurotic fears for prestige and craving after recognition of superiority, but because it engenders, automatically, the compensation of the a-social or even anti-social attitude in an increased striving after just that which it is tearing to pieces, i.e., the establishment of a "frictionless paradise" in which the individual could pursue his own neurotic aims without conflicting with those of his fellowmen.

The truth of this statement is borne out by the fact that critical times like war give rise to the outbreak of a terrifying number of mental and psychical disturbances varying from increased nervousness to raving mania.

The last war showed very distinctly what can be expected, with the difference that man's ever progressing knowledge contributes constantly to the destruction of civilization (which the products of this very civilization, science and technic, are supposed to further and to defend).

One of the consequences of the psychical starvation of people and their misdirected aims showing up in the multifold, selfcentered abstractions from reality, is the problem of neuroses, of which the war neuroses are a circumstantial expression. The curse of social illadjustment proves itself in the unending streams of people, sick in body and soul, asking for help, crowding the hospitals, asylums, veterans' homes, clinics and offices of physicians. The latter, drowning in a flood of work, trying this and that, the whole register of medical science and means of treatment, and, unfortunately, doomed to fail in very many cases, because the "functional" ailment does not, or only temporarily, respond to physical attack.

Yet, here they are with their complaints: Symptoms of sleeplessness, irritability, failing memory, headaches, incapability to concentrate, fatigue, exhaustion, aches and pains, anxiety, nightmares, ulcers, fits and seizures; a variety of ailments that physicians are used

to see at all times and are wont to name: psychasthenia, neurasthenia, nervousness, neurosis, mostly without any organic basis, often with organic consequences.

The embarrassment over the lack of an organic cause shows in the juggling with strict antitheses of too much or too little: too easy a life and, therefore, not enough real worries; too difficult a life, and, therefore, too many sorrows; too much or little money, or work, or recreation, or sleep, or time, or sex, or anything that anyone wants to make responsible for his own or anybody's shortcomings.

This outlook on nervousness or any other manifestation of defective forms of living together, however, has proved very unsatisfactory from a medical standpoint because the patients don't get well but keep coming back, sometimes with different symptoms, very often changing not only complaints and treatments but the physicians as well.

A better understanding of the whole problem might help the medical profession and the patients in their attempt to restore health and to find the way back to constructive living. Nothing would be a greater error than to consider nervous patients either as "ill" in the strictly medical sense of the term, or as needing "simulants," if no organic cause can be detected. The nervous person is not a malingerer eager to receive financial compensation (although in many cases striving after financial security may play a role), yet, he is not sick, in spite of symptoms and suffering. The physical disturbance is the response of the organ to a personality problem as was described by Alfred Adler in his "Study of the Inferiority of Organs."

An original inferiority of a physical system (respiratory, digestive, sense), mostly inherited and, therefore, detectable in the whole family history, reflects upon the child's psyche; it is liable to lower the self-esteem and to compel the individual to strive after overcompensation of his increased feeling of inferiority. The intensified struggle for self-assertion leads to a greater fear of failure; in any conflict-situation the inferior organ resounds like a string on a violin would vi-

brate in response to sound or noise.

The result does not depend upon the organic inferiority itself but upon the attitude the individual takes with respect to the solution of his problems. Where these are faced objectively with the will to accomplishment, regardless of the risk of failure, the whole person and with it the inferior organ will not be put under tension and the organ can function as well as it's general condition allows.

But the physical unrest in a "nervous" person who responds to demands of life, even if met positively, with inner tensions, will set a tension off in the inferior organ which will speak up and manifest its presence in seemingly organic disturbances. Where, however, fear of life and of losing face in any collision between selfevaluation and threatening failure becomes paramount and objective approach to problems is giving way to subjective ones, the noise created by this inner struggle, actuates multifold vibrations in the string.

Organic Follows Functional Disease

Although the whole body is affected by the tension the anatomically, physiologically or functionally inferior organ responds more violently to changes in the bodily atmosphere. Overplayed, the string may break eventually, which accounts for the fact that *very often real diseases develop on the basis of functional disturbances*; an individual, for instance, endowed with the capacity to produce hydrochloric acid under psychical strain may eventually suffer from an ulcer if the circle of abuse of the organ as a face-saving device and the resulting lowered selfconfidence cannot be interrupted soon enough.

The "organ-jargon," the indicator for the existence of inferior organs, could, if correctly understood as a warning signal, be of great value in preventive medicine; the individual experiencing his organ dialect can be taught a better understanding of psychical and physical relations and learn not to express his tensions physically. The organ-jargon is still a nervous, not a neurotic symptom.

When and if, however, the "nervous character" that an individual developed in early childhood and trained according to self-created fictitious aims of superiority and along lines of direction dictated by his distorted perspective of past, present and future, gets into a collision with any outside factor threatening failure while the individual is craving for success, attention and approval, the danger zone has been reached. The neurotic symptom that arises in these situations

is the shield against realization of inadequacy, imperfection, and grants the continuation of living in a world of "appearing" instead of "becoming." In order to avoid any circumstance dangerous to self-evaluation, the inferior organ is put under an overamount of tension. It is used as the mirror in which the neurotic sees himself competent and adequate. From then on all the problems of life are visualized from the standpoint of the symptom, and health, a very important means for constructive living, becomes an end in itself.

While the organ-jargon of the nervous person is nothing but a bothersome concomitant factor, the neurotic symptom has to fulfil three very important functions: "It has to serve as an alibi for failing to accomplish what would bring about the craved triumph. It makes it possible to postpone decisions. It permits greater expectation of appreciation for smaller achievements, as these had to be worked against the impediment of suffering" (Adler).

The moment that an individual approaches his problems with the feeling that "*If it were not for my symptom I could do this or that,*" the purpose of the symptom is quite evident. The symptom itself may affect the body (functional neuroses) and lead through chronic abuse of the organ to real diseases, or lie in the field of thinking expressing itself in doubts, scruples, fears (obsessions), in the realm of feeling with emotional outbursts in anger, self-pity, despair, (moods), or in the sphere of action as raptus, fugues, rituals (compulsions).

The Doctor Should Ask This Question

Whatever the symptom, it always proves that there is fire burning under the surface of which the visible smoke is the symptom. The problem that the individual fears to face can often be unveiled with the question: *What would you do, if you did not suffer from this trouble?* The answer mostly indicates which situation in the individual's life is menacing to his self esteem, or at least so in his own estimation.

If the individual would produce his symptoms voluntarily, he would not be neurotic but a swindler. But he does not know about the deep inner fight that is going on within himself although the faultive attitudes are constantly trained in apperception, dreams, memories.

The Task of the Physician

A cure of the symptom alone without the treatment of the whole person will be

necessarily unsatisfactory and mostly bring relief for some time only.

This makes the task of the physician so very difficult; he is called upon to take care of many a patient whose symptoms are not effects or expressions of underlying causes that can be cured, but means to avoid situations which threaten the ego. Many cases would first have to be prepared psychologically in order to benefit from medical treatment. Only understanding of their inner situation would make them willing to give their organs a chance to recover whenever an organic disease has developed on the basis of a functional one. Many first have to learn to "let go," as for instance stuttering and tics and other troubles of similar kind become accessible to "reeducation" after removal of the psychical barrier.

The question is, one could say, easier for the psychiatrist to whom the patient comes because he realizes that he is missing out in life, and very difficult for the physician of whatever other special training as the patient demands of him fast relief from a symptom that in the patient's view obstructs his capacity to work, to get along in society, to be a partner in marriage or any other problem of daily life. The physician is the more handicapped by the fact that the patient expects to be assured that the disturbance he is suffering from is inevitable and that he himself is not to be made responsible for the outcome of the treatment.

While the psychiatrist or medical psychologist is concerned with the personality of the patient who has a symptom, and has to demask it as to its purpose, the medical man is called upon to bring the symptom to disappearance. The difference in approach to the problem frees in the first case the patient from his erroneous attitude after which he can discard his symptom *actively* as with the reduction of unreachable goals of perfection to attainable ones it has become useless; in the latter case the patient is *passively* liberated from the expression of his wrong evaluations which remain undisturbed and, therefore, liable to create new explosions.

The problems of daily life, for many people very difficult to face even under normal circumstances because of pampering in childhood, self-pampering wrong ideas of masculinity or uniqueness, lack of courage to risk failures, and many other factors, become certainly more complex by the strain of war and in the periods following it. Many "nervous" individuals who slipped through

the induction procedures intensify their symptoms after being discharged in an attempt to prove that their failure was not attributable to some unimportant discomfort but to a fateful constitutional make-up; this "arrangement" changes failure for which one would have to feel responsible into defeat for which anything, heredity, environment, disposition, can be blamed. Individuals who because of their pampered education cannot stand regimentation, for instance, won't find it more pleasant to merge into the ungloriousness of daily life with its routine, especially after having tasted for some time the fruit of adulation so generously handed to the men in uniform.

More difficult still will be the readjustment for those who enjoyed approval for their deeds, and honours of rank. Back in civilian life, which does not warrant either reward or glory, the military rank does not entitle to anything but one's own memories among people who, busily occupied with the pursuit of their own aims, are very apt to forget and to lose interest in those whom a short time ago only they had set on pedestals. This may bring some trouble for the discharged people after the war and now, too, to "step down" into occupations corresponding to their preparedness for them and not to their aspirations. High school boys who jumped from the schoolbench into commissions, trained to give orders and never too willing to take them, won't be too satisfied to go back to studies or work considered, maybe, beneath their dignity. Another difficult problem is very likely to result from the lack of sexual inhibition always predominant in times of crisis. Here, too, fear of loss of prestige, especially with physically handicapped people, may lead to grave psychical complications.

Case Histories

A few case histories of nervous and neurotic individuals may illustrate the difference of mechanism:

Student, 22, who becomes very excited before examinations and throws up every time he has to present himself, yet is very good at his work and passes the tests well.

Another student, 23, suffering from narcolepsy for the last 5 months. No previous encephalitis or any other disease. Incapable of study which "If he could have stayed awake would have been easy for him," he shuns the last examinations afraid that in the chosen profession he might not turn out as being "better than anyone else."

Woman, about 55, responds to any pleasant or unpleasant emotion with the urge to urinate.

Woman, 38, cannot go out or work or mix with people because she cannot control her bladder whenever she leaves home.

Boy, 16, wearing glasses, has a nervous blinking whenever faced with new situations without ever trying to get out of them.

Man, 36, who is incapable of keeping his eyes open. No muscular defect. He is a pampered only child who wants to be the boss. A conflict with his wife who left him because of his tyrannical attitude and a set-back at his working place where, because of his asocial behavior, some other man, less efficient than he, was made foreman, brought the symptom to the front in an individual whose earliest recollection concerns the fact that "he never wanted to see anything disagreeable."

Young pianist suffers from very bad stage-fright, tachycardia before concerts.

Pianist, 23, injures one of his hands every single time approximately 3-4 weeks before a recital. The fact that he could not practice enough because of the injury serves as alibi in case of criticism painful to his self-esteem.

And so on, and so on in endless variety. Heart trouble, vasomotor rhinitis, asthma, dizziness, fainting spells, "epileptic" seizures, impotence, migraine, diabetes, neuralgias, amenorrhea, the whole register almost of medical problems which can be expressions of the organ dialect,

diseases with organic etiology or neurotic symptoms.

The first will respond in very many cases to the physician's educational explanation of the intimate relation between psychical tension and organic inferiority; the second may have to be treated by the physician and the psychiatrist simultaneously in order to help the patient to remove the "psychical overstructure" over organic diseases, but they belong primarily into the hands of the medical man; the third are and, probably, will remain the crux of the physician unless he becomes aware of the psychical structure of the whole personality and is willing to avail himself of the aid of the psychologically trained person.

Because of the number of cases which are in need of psychical readjustment before physical health can be obtained, new methods such as group therapy may have to be used more frequently than before.

Medical science itself, however, will have reached its utmost development when all the physicians have become educators and when less brain substance will have to be used to repair damages acquired in early childhood through erroneous interpretations of the world and one's own position and value in it, and much more for the prevention of such social aberrations. The development of true social interest and education to courageous approach to life without any alibis will liberate the individual from suffering and the world from wars.

1044 Tiverton Avenue.

Joint Aspiration

Wrap an elastic bandage roll above and below the joint to be aspirated, leaving only one small area about the size of a dollar uncovered. This area includes the desired point of puncture; in the case of the knee, it is the *medial aspect of the patella*. The firm, elastic pressure compresses all the fluid to the exposed area.

Aspiration is easy because (1) sensation is dulled, (2) painful structures are below the bulging collection of fluid and (3) the pressure of fluid causes it to drain freely. If the fluid stops flowing, rotate the needle or have the patient internally rotate the knee. A large bore needle (gauge 17) should be used.—CAPT. DAVID GOLDBERG (MC), *Am. J. Surg.*, Apr. 1945.



The Diagnosis of Appendicitis

By EDGAR BURKE, M.D.* Jersey City, New Jersey

DR. BURKE kindly furnished these illustrations and teaching charts which are used for the instruction of the house staff at the Medical Center. So many relevant clinical pointers were included in his letter to the editors that we are publishing them.

"The overwhelming majority of the patients with appendicitis have been previously examined and treated by some outside practitioner, and many have peritonitis when they arrive in our admitting room—appallingly many."

"I am well within the truth when I say that fifty per cent have been 'treated' (!) by physicians for from 2 to 4 days before being sent here for surgical relief . . . Many practicing physicians are not competent to diagnose even clear-cut cases of appendicitis when they see them. Many apply ice bags, now as in the nineties. The patient may consider himself lucky, in not a few instances, if he has escaped the use of some laity advertised purgative. . . . The effects of this we see every day in the number of children admitted with very advanced appendiceal pathologic changes due to the employment of a proprietary purgative."

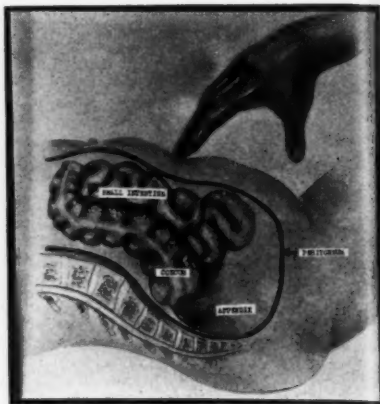
"The general practitioner has no business 'managing' any case of appendicitis. . . . He should confine his activities to diagnosing the disease and then getting his patient into the hands of the nearest competent surgeon with all speed."

"Any one can diagnose the average, classical case. Many cases are not textbook pictures. I would strongly urge the general practitioner, when confronted with a puzzling case that might be one of appendicitis, to seek the aid of his surgical colleague at once, without waiting to see what the morrow may bring. It may so easily bring rupture, peritonitis and exitus."

"A frequently encountered statement, made by the family physician, is 'Why, doctor, it can't be appendicitis. The white blood count was only 8,000.' We see dozens of patients with perforated and gangrenous appendices each year in whom the preoperative count, by expert technicians, showed wholly normal figures."

"Another pitfall is the low lying, pelvic appendix. Pressure over McBurney's point by the physician fails to show tenderness or reflex rigidity. Had he examined his patient per rectum the exquisite tenderness actually present would

*Chief Surgeon, Medical Center



Why, particularly in obese patients, pressure tenderness over McBurney's point may be difficult, if not impossible, to elicit. Here rectal palpation will reveal the site and nature of the lesion.

have been revealed at once. (I think it was Sir Arbuthnot Lane who said, 'The function of the consultant is to insert his index finger in the rectum of the patient'.)"

"Appendicitis in the aged, (we have had severe cases in the 9th decade of life!) is particularly treacherous because of its insidious onset and few symptoms. The difficulties attendant upon diagnosing early, acute appendicitis in infancy and childhood are well known. Here operation should be performed on mere suspicion. Doing so will save many lives and adherence to this rule will result in few unnecessary laparotomies."

When the less alert practitioner says, 'This might be early appendicitis,' it is already half-past high time to get the operating room ready. When he says, 'This is a case of appendicitis,' it is safe to assume that the patient already has peritonitis."

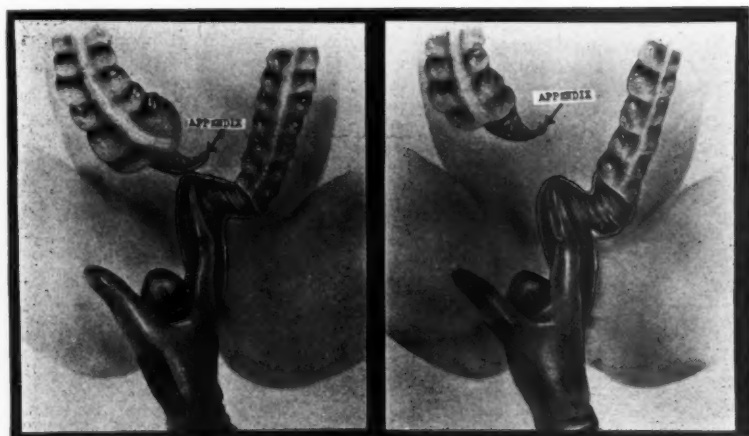
Acute Appendicitis: The Objective Signs

Local Tenderness	The one, never failing always present and ever dependable sign. Its location may vary. It is the duty of the physician to search for and find it.
Hematuria	Microscopically recognizable red blood cells in the urine sometimes occur in cases where a violently inflamed appendix lies close to the ureter.

ACUTE APPENDICITIS

THE SUBJECTIVE SYMPTOMS

- | | |
|---|--|
| 1. Epigastric or umbilical pain. Followed by ↗ | This is usual. When seeing a patient suspected of having Appendicitis ask him, "Where was the pain when it first began?" In nine cases out of ten he will place his hand on his epigastrium or begin massaging his umbilicus. |
| 2. Right lower quadrant abdominal pain. Followed by ↗ | This is usual. After a few hours the pain shifts to the right lower abdominal quadrant. Ask the patient, "Where is the pain now?" He will almost always point with his index finger to the cecal area. |
| 3. Nausea. Followed by ↗ | Almost always present in some degree. |
| 4. Vomiting. | One or two attacks of gagging or frank vomiting are typical. It is unusual for this to persist. If the sequelae of vom. persist in this case it probably isn't Appendicitis! |
| 5. Constipation. Inability to expell flatus. | This is the rule. The patient will often say, "I know I'd feel better if I could only pass wind!" |
| 6. Diarrhoea. | 5% of all cases in adults and 15% in children begin with symptoms strongly suggestive of so called "gastro enteritis" or Eberle-Colitis in which diarrhoea is a prominent symptom. <u>Cave!</u> This type can be extremely misleading. |
| 7. Chills. | Rare, an ominous sign! Usually means gangrene of the Appendix. Occurs in excessively fulminant cases, and often denotes very early ascending infection via the portal root veins. |



In an average case of acute appendicitis, with normal situs of the coecum, careful and gentle rectal palpation will usually reveal unmistakable tenderness.

Where acute appendicitis occurs in a patient with mal-descended coecum, rectal palpation often gives a misleadingly negative pain reaction. A glance at the above diagram will explain why.

Rheumatic Fever V: Functional Systolic Murmur

By ABE RAVIN, M.D.,

Assistant Professor of Medicine

Colorado University School of Medicine, Denver, Colorado

What it is: A functional "physiologic" or "accidental" murmur implies that no cardiac lesion is present.

What causes it: Anemia, fever, hyperthyroidism, chest deformity, pathologic lung changes. More often, especially in children, it may occur for no evident reason.

The chart shows factors to be taken into consideration in evaluating a systolic murmur. No one or two factors are decisive, but all must be taken into consideration. The vast majority of the murmurs falling under *Borderline* are functional murmurs, but they merit future check-up.

A history of rheumatic fever or chorea has a definite place in evaluating a murmur. The appearance of a new murmur is usually significant.

Fever alone may cause a systolic murmur.

Marked or sudden anemia may also cause a systolic murmur.

Cardiac Findings, other than the systolic murmurs, may indicate that the murmur is organic. For example:

1. A diastolic murmur is important.
2. Definite cardiac enlargement.
3. Hypertension.
4. Accentuated pulmonic sound may occasionally be important.
5. Clear cut electrocardiographic changes.

Murmurs heard when the heart rate is slow are more significant than when it is fast.

Intensity

1. The louder a murmur, the more probable it is that organic damage is present.

2. Murmurs are graded on a basis of 1 plus to 6 plus:

- 1 plus: So faint that careful examination is needed to hear it. — 2 plus: Faint. — 3 Plus: Moderately loud. — 4 plus: Loud — 5 plus: Very loud. — 6 plus: Loudest possible murmur.

	Organic Murmurs	Borderline	Functional Murmurs
Other evidence of cardiac involvement.	Enlarged heart. Diastolic murmur. Definite electro-cardiographic changes	Accentuated pulmonic second sound. Borderline variations in electro cardiogram.	None
History	Chorea. Rheumatic fever.	Severe tonsillitis or Growing pains.	None
Intensity	Loud—(3 plus or louder).	1 plus to 3 plus	1 plus to 2 plus; (often 3 plus in children).
Location—of maximum intensity	Murmur at apex, or aortic region.	Murmur in 3rd or 4th left interspace.	Pulmonic Region.
Character Pitch.	Musical Whistling Blowing High Pitch.	Harsh Rough (blowing), Low and high pitch.	Soft rumbling low pitch.
Age			Children more common.

According to Levine, a murmur of 3 plus or louder is usually associated with other heart damage if a careful examination is performed. This principle is not applicable in children.

Location

Listen to the murmur, follow it to its maximum intensity and determine its location. If its maximum intensity is at the apex, it is more likely to be organic. If maximum in pulmonic area, it is probably functional.

The transmission of a murmur depends mainly on its loudness.

Change in Murmur

1. Exercise usually causes a murmur whether organic or functional but occasionally it becomes fainter. In normal persons, exercise often results in the hearing of a murmur.

2. Bell stethoscope — Light pressure with the stethoscope bell enables one to

hear low pitched sounds. Firm pressure causes low pitched murmurs to become faint, higher pitched sounds are little affected. Method is therefore of value in determining pitch.

3. One should record murmurs on the patient's record giving time in cardiac cycle, intensity (+1 to +6), point of maximum intensity, pitch and quality direction of transmission, and effect of exercise and posture.

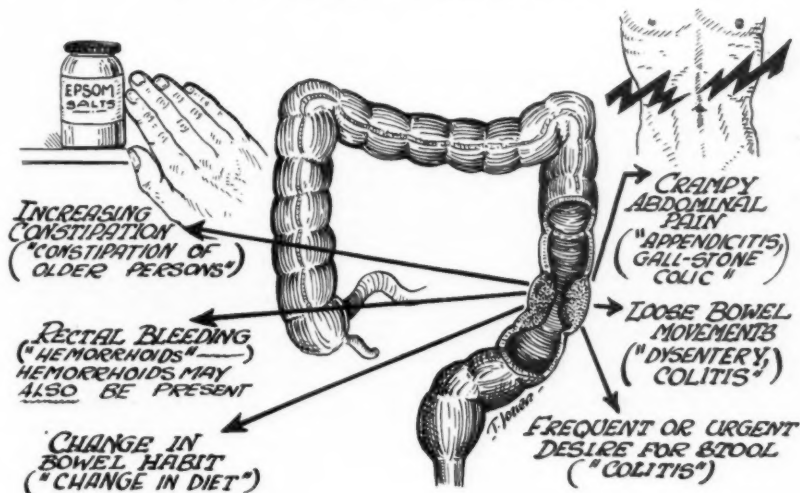
Discussion by Dr. T. D. Duckett Jones

Many functional murmurs are loud, so one cannot make a definite diagnosis of organic heart disease on the basis of loudness alone.

If the sound changes markedly with respiration, the murmur is functional. This is also true of a murmur that must be sought for in all positions. The murmur of mitral insufficiency may be heard well in any position, anywhere.

Common Mistakes in General Practice

The major signs of this neoplasm are printed at the ends of the arrows; wrong "diagnoses" are in bracketed quotation marks.



Inflammatory Urethral Strictures: A Simple Method of Dilatation

By ROBERT LICH, JR., M.D., M.S., F.A.C.S.,* Louisville, Kentucky

THE universal use of sulfonamides and penicillin in gonorrheal therapy has unquestionably aided in reducing the incidence of inflammatory urethral strictures, but more specifically this is a result of the discontinuation of the former often misused, poorly understood and hurriedly executed methods of hydrostatic and mechanical urethral therapy. In spite of its diminished incidence, the potential seriousness of the lesion is unaltered.

Technic

A method of urethral stricture dilatation which has proven particularly valuable in my hands is that of retained urethral catheters which are increased 2F. (French) sizes every 12 to 18 hours until the stricture is completely relieved. The patient's urethral caliber is then maintained by the frequent passage of steel sounds. The interval between dilations is dictated by the stricture's contractility and thus urethral dilatation will in time often become only an annual exercise to determine the normalcy of the urethral channel.

Urethral strictures of small caliber that can be traversed with a filiform should be dilated by the use of progressively larger Phillips catheters attached at successive 12 to 18 hour periods to the original filiform. The increase of catheter size should be 2 F. until a 22 F. catheter size is reached. At this time the Phillips catheter and attached filiform should be completely removed and a 20 F. whistle-tip latex catheter substituted and retained in the urethra. The 12 hour intervals of increasingly larger rubber catheters is continued until the urethral caliber reaches 26 or 28 F.

Urinary Antiseptic

During this procedure, even in the absence of urinary tract infection, it is deemed necessary to exhibit a urinary antiseptic. Methenamine with sodium acid phosphate is most useful for this purpose, but it must be remembered that for this drug to be effective the urine

must be strongly acid. Furthermore, during the period of an inlying catheter the bladder should be irrigated at least twice daily with either 1:8000 potassium permanganate or a 5 per cent solution of lactic acid. Also, at each catheter change the urethra must be gently but thoroughly flushed. A large daily fluid intake is mandatory.

Caution

The key to success in urethral stricture dilation is *gentleness*, for a traumatized stricture leads to contiguous tissue extravasation and reaction with a further reduction of the stricture caliber and an increase in the magnitude of the lesion. It is possible, in the great majority of cases, to fully dilate non-operatively even very small inflammatory strictures with only a modicum of discomfort.

Significance of Bleeding

A word of warning about the urethral stricture that bleeds profusely on each gentle attempt at dilatation; this finding is suggestive of a urethra neoplasm and such patients should be given the benefit of expert urological consultation.

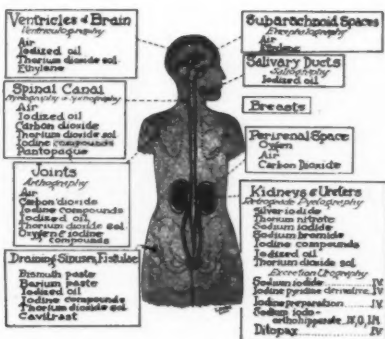
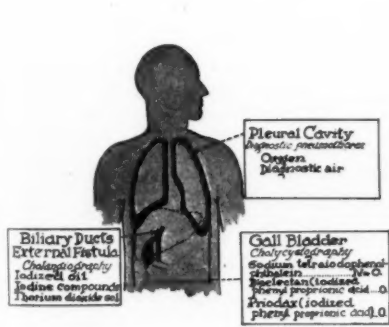
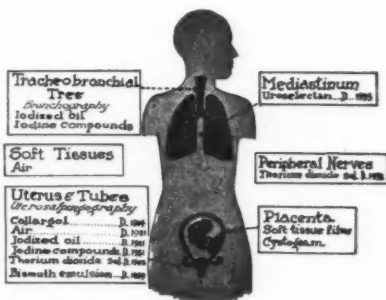
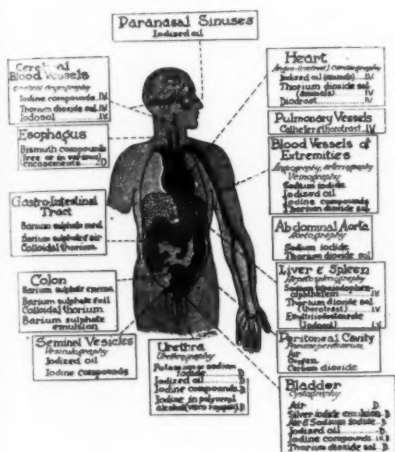
The same disposition is advocated for patients suffering with impermeable strictures and resilient strictures. It can not be too strongly stressed that a urethral stricture is a lesion of great potential gravity and its treatment must be undertaken with considerable caution, judgment and understanding. The direct effects of a stricture is an ever increasing retrograde hydrostatic pressure with progressive urinary tract distortion and eventual renal destruction, particularly in the presence of infection which is almost universally present in the final phase of any obstructive uropathy.

This is not a plea for the practitioner to send all his patients with urethral stricture to a urologist but rather to suggest a safe and rational therapy. On the other hand, the seriousness of the lesion is reiterated and an earnest plea is made for the immediate referral of the patient with a bleeding stricture, an impermeable stricture and a resilient stricture in order to protect the interests of the patient and physician alike.

*Surgeon, U. S. Public Health Service (Reserve) Senior Medical Officer, U.S.S. General A.W. Greely.

Diagnosis by Roentgen Rays

Leon Rigler, M.D., Chief of X-ray at University of Minnesota Hospitals, Minneapolis, indicates the wide range of diagnostic aid offered by roentgenology for each organ of the body. (Adapted by CLINICAL MEDICINE's artist from the author's sketches in *Radiology*). The contrast agent is administered orally (O.), intravenously (I-V.), intramuscularly (I-M.) or by direct injection (D.). The last agent listed is the most recent one to be used.



Bloodless Operations of Hands and Feet

Delicate operations on the extremities, such as incising deep infections, suturing tendons and deep lacerations, can be much simplified by rendering the surgical field almost bloodless. The absence of free bleeding permits an almost anatomic dissection to be performed and important nerves and arteries to be avoided.

Esmarch Bandage

An Esmarch bandage (strong, flat rubber, 3 inches wide and 6 yards long) is applied to the arm or leg, after the limb has been elevated for 10 minutes. It is first applied to the foot or hand and then wound around and around the extremity (See Fig. 1) until it is all covered.

Each turn of the bandage is fully stretched before being applied to the limb, and is applied alongside, not overlapping, the preceding turn, so that all the skin surface is compressed up to the middle of the thigh or upper arm. It does not overlap (Bailey) any preceding turn. The tapes are then tied.

Beginning at the foot or hand, the bandage is unrolled just enough (See Fig. 2.) to expose the operative field.

Blood Pressure Cuff

A simpler method but one that must be watched more closely is the use of the ordinary blood pressure band (syphygmomanometer cuff). The mercury is pumped up to a pressure of 250 mm. which effectively cuts off arterial circulation. This pressure should be released for 5 minutes of every one half hour (at which time, bleeding vessels may be picked up and ligated). (See Fig. 3).

Epinephrine-procaine anesthesia

The injection of procaine solution containing epinephrine (6 minims to the ounce) constricts the blood vessels and prolongs the duration of the local anesthesia. (See Fig. 4.)

Tension

L. Kraer Ferguson suggests that tissue tension and pressure produce temporary hemostasis. While the incision is being made, the assistant makes pressure on each side so that the incised tissues separate more easily and the incised vessels will be compressed. (See Fig. 5).

After the incision has been extended into the subcutaneous tissues, rake retractors or Allis forceps are applied to the sides of the wound and sufficient tension maintained to prevent any marked bleeding. (See Fig. 6).

"Often, in the removal of a subcutaneous lipoma, the tumor may be delivered without any dissection, except the incision with the scalpel and the tension on the wound edges provided by the rake retractors."

PICTORIAL SECTION



Fig1

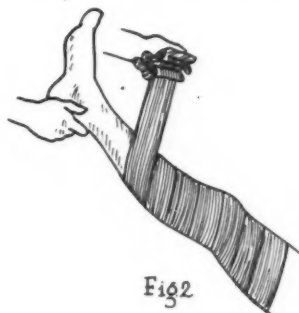


Fig2

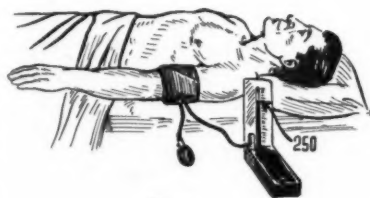


Fig3

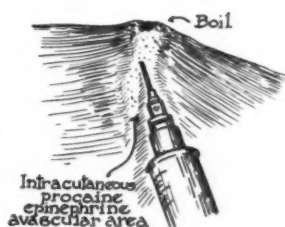


Fig4

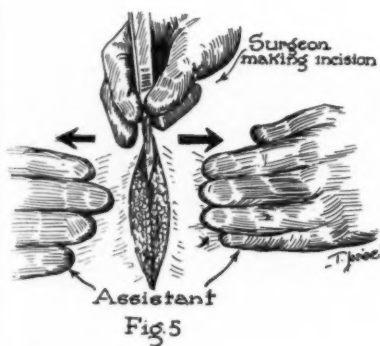


Fig5

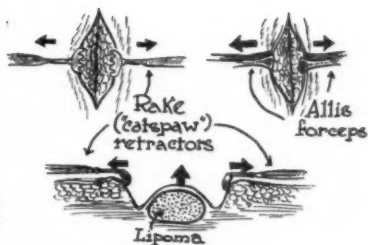


Fig6

Empyema: Diagnosis and Treatment*

Empyema: An abscess in the lung (pleural) cavity.

Courses: In the first days of the infection, gravity tends toward a carrying of the infected material to the bottom of the pleural cavity; no adhesions are present to limit the spread. As the amount of purulent fluid increases, the lung is pushed away from the chest wall. Later, adhesions limit the process and tend toward fixing of the mediastinum.

Causes: Infections of the lung, trauma, adjacent infections, artificial or spontaneous pneumothorax or thoracic operations. Tuberculosis should be remembered as a cause (it may resemble empyema arising from other causes).

Indications for surgery: 1. If pyogenic organisms found. 2. After repeated aspirations to reduce size of empyema cavity. 3. If the pus that is aspirated is so thick that from 75 to 90 per cent, of a specimen (in a test tube) (see Fig. 1) is sediment, after standing over night.

Early operation for empyema may result in collapse of the lung and total empyema of the entire pleural cavity, or may result in interference with the heart and opposite lung due to movement of the mediastinum.

Aspiration: Daily or every second day. Aspiration for 10 days reduces the empyema to small size. (See Fig. 2).

Surgical technic: The patient should be placed in the semi-Fowler position (See Fig. 3).

Don't inject air into the pleural cavity or let air enter into it, except in tuberculosis as an artificial pneumothorax. Air combats what we want, the good expansion of the lung (Fig. 4 shows how the air collapses the lung, leaving a high empyema cavity requiring drainage with a long tube (See Fig. 5 and 6). Air aspiration may be prevented by use of a rubber tube which is clamped off or by a 3 way stopcock.

Point of drainage: There is no set rule for locating the point of drainage, as fibrin is close to the floor of the empyema cavity. One should drain as low as possible, remembering that in acute empyema, the diaphragm will rise one rib and one interspace, so the point selected should be this much higher. In the posterior axillary line, ordinarily, one

*"C.M." Staff notes and sketches from a paper by Dr. John Alexander, Professor of Surgery, Univ. of Mich. Med. School, Ann Arbor, Mich., at the I.P.M.A. meeting, 1943.

may aspirate from below upward until pus is found.

Technic: Fig. 7 shows the incision made into the periosteum. Fig. 8, the resection of a portion of the rib and the insertion of a thumb-sized drainage tube.

The skin should not be sutured. The free end of the tube should be carried into a water-sealed bottle. The tube employed should be large enough so that all fibrin drains out; there should be no working out of pus and air replacing it. The drainage should be airtight for weeks. The tube, with safety pin, should be taped in. Continuous suction (negative pressure) should be used in the empyema cavity so it will decrease in size and the lung will expand.

Postoperative care: The cavity should be measured weekly, and negative pressure drainage continued until it will contain less than 30 cc. Check to be sure that the tube is not in too far. If a tube is withdrawn too rapidly, the empyema cavity may not be obliterated behind it and an infected space will be left.

Measure cavity by: 1. Use of a sound curved to fit; or 2. introduction of a measured amount of fluid (while patient is lying on opposite side, with hips elevated); or 3. use of gloved finger; or 4. injection of Lipiodol and measurement of cavity by taking an x-ray (in same position as above).

Chronic empyema causes include: Surgical Failures 1. Too early operation with lung collapse, followed by total empyema; 2. Too late operation by which time a rigid cavity has formed; 3. Too short a drainage tube, which results in superficial closure and a deep infected cavity; 4. Too small a tube which does not drain thick plugs; 5. Too long a drainage tube which acts as a standpipe; 6. Drainage which was not dependent; 7. Undrained pockets; 8. Drainage was not air tight, no suction was used, and less commonly; 9. Foreign body in the empyema cavity (such as a section of the rubber tube); 10. Scar in lung; 11. Presence of lung abscess or perinephritic abscess which may have been original cause of empyema; 12. Persistence of tuberculosis activity in walls of cavity.

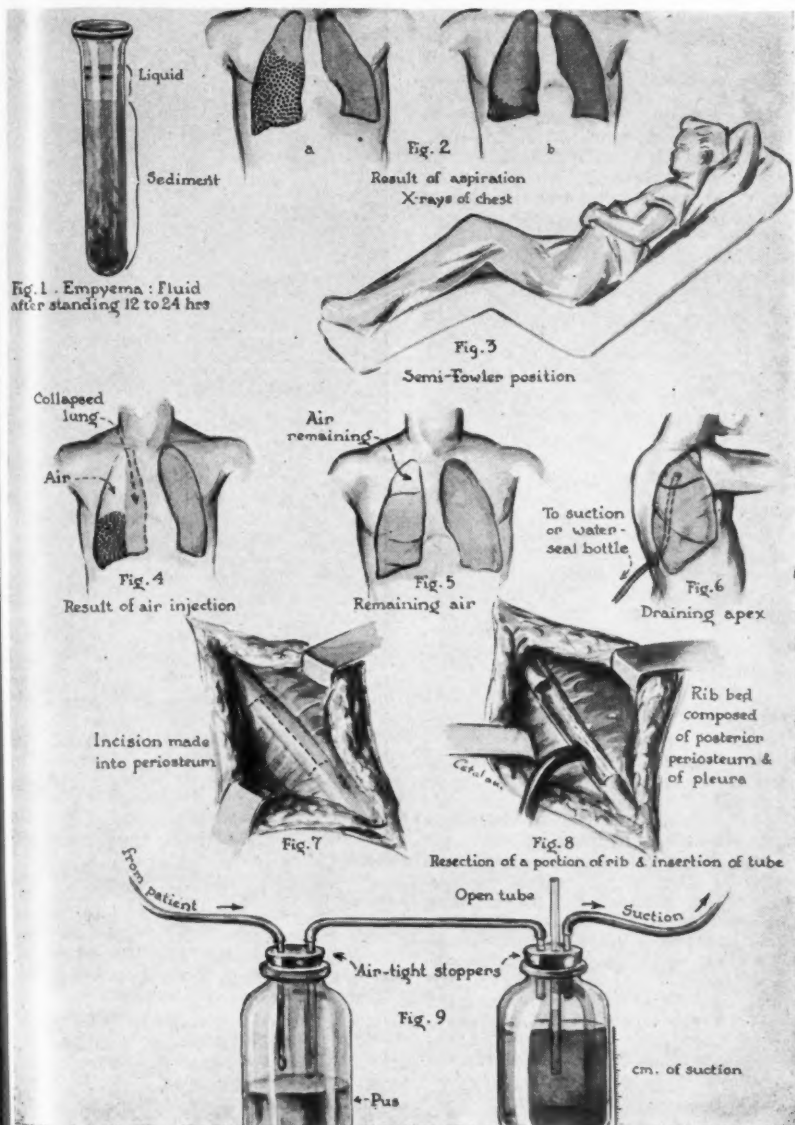
Treatment of chronic empyema: 1. Dependent drainage; 2. Biopsy for tuberculosis or other infection; 3. Airtight suction drainage. 4. Stationary size of empyema cavity after one month or

more of suction indicates a thoraco-plasty.

Fig. 9 indicates the arrangement for suction; the amount of suction is indicated by the cm. shown.

Remember, drainage of an empyema should be carried out promptly: 1. if

foul pus is present, indicating a putrid empyema, 2. if a lung abscess has ruptured into the pleural cavity, 3. if a bronchopleural fistula is present, 4. if the pus is so thick that needle aspiration is impossible or 5. if the empyema is recurrent.



Common Errors in Diagnostic Roentgenology

By ROBERT J. REEVES, M.D.,* Durham, N. C.

DURING the past decade several x-ray manufacturing companies have found that the general practitioner has become more and more interested in x-ray and they are persuading him to buy a small x-ray unit for his office, convincing him it is a necessary addition to his practice and that he can do most of his own x-ray work with little knowledge of the differential diagnostic possibilities. He is fully aware of the necessity of surgical help when the occasion arises and it behooves the trained radiologist to warn him of the frequent diagnostic errors which occur when he relies too much on the x-ray films he makes.

While the detection of tuberculosis has been the prime objective of the general practitioner in chest x-rays, there is a wealth of nontuberculous conditions demonstrable in chest roentgenograms. One such condition has recently come to our attention where the patient was observed and treated for a cardiac condition but, not improving, the patient finally sought relief elsewhere. She gave a preliminary history of difficulty in swallowing and precordial pain. A careful fluoroscopic study showed a non-pulsating mass, filling the mediastinum. When barium was given it was readily evident that this was a dilated esophagus. The heart was normal.

A review of the literature on mega-esophagus was recently made by Hurst and Bassin in the December 1944 "*American Journal of Roentgenology*."

Case Report I

A 67 year old female complained of difficulty in keeping food down for 15 years. She had been well until her menopause at age of 52, when she began having difficulty in swallowing and could eat very little. She would vomit 10 to 15 minutes after eating, without previous nausea. The vomitus had never been bitter or acid. There seemed to be no difficulty in eating but the patient seemed to keep down only small amounts of food eaten. There was constant precordial pain until after vomiting. The appetite remained good but there was a gradual weight loss of 100 pounds. There was increasing weakness, intermittent

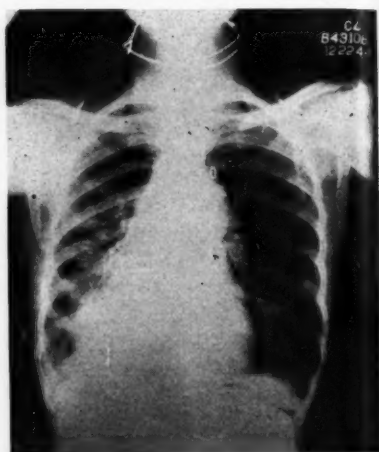


Fig. 1. Case Report I: Large shadow over cardiac region.

dizziness and fainting spells. At times the patient states her temperature would reach 105 degrees Fahrenheit. She gave a history of having been treated for heart trouble. The heart was enlarged to percussion and there was a short lowpitched systolic murmur over the aortic area. X-Ray examination of the chest showed a large shadow over the cardiac region. (Fig. 1). When barium was given, it was readily seen that the esophagus was greatly dilated, (Fig. 2).

She was seen in consultation by the surgeon and a combined plastic operation was performed on the lower end of the esophagus and cardia of the stomach. She was soon able to take soft food and the esophagus began to show improvement in tone.

Another frequent mistake is in failing to recognize the significance of the so-called psychic vomiting. Frequently the case is diagnosed as a neurosis and x-ray examinations are not made or the findings not properly evaluated. The following case is an example.

Case Report II

White female, aged 21, brought into the psychiatric clinic for examination and treatment regarding nervousness, nausea and vomiting.

*From the Department of Radiology, Duke University School of Medicine.

Has had stomach trouble most of her life. Has always been undernourished and nervous. Has never had much appetite. She vomited very easily, especially when excited. The pain has not been sufficient to put her to bed. The condition had been diagnosed as a nervous stomach.

Physical examination was essentially negative except she was found to be thin and malnourished. Mentality test was below the average. X-ray examination of the stomach showed it to be moderately enlarged with a marked delay in emptying. The duodenum was tremendously dilated and emptied very

little during the examination, (Fig. 3). There was frequent antiperistalsis and regurgitation of barium into the stomach.

Exploratory laparotomy was performed and a congenital band was found across the third portion of the duodenum. This was freed and the patient made a rapid recovery. She gained weight and her nervousness gradually disappeared.

Conclusion

These cases stress the importance in having patients x-rayed and studied by a competent radiologist. The general practitioner and radiologist working in close cooperation can solve many puzzling cases.

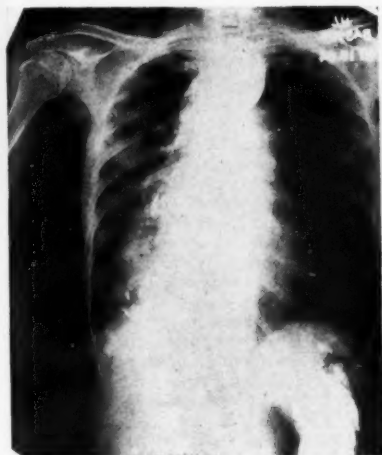


Fig. 2. Case Report I: Barium shows greatly dilated esophagus.



Fig. 3. Case Report II: Dilated duodenum.

Treating the Cervix

The common conditions found in the cervix are: Cervicitis, endocervicitis (inflammation inside the cervical canal), erosions, cysts, polyps, leukoplakia, lacerations and carcinoma. Any suspicious erosions should be biopsied, taking a portion of normal cervical mucosa also, for submission to the pathologist.

Simple erosion: Cauterize deeply with red-hot, not white-hot, cautery.

Lacerations: Cauterize deeply into the laceration so that subsequent contraction will close the laceration rather than widen it.

Cysts: Remove with snare and cauterize base, or cauterize with hot cautery.

Cervicitis: Cauterization is the best treatment.

Leukoplakia: Excise widely and deeply. If more than one, perform cervical amputation as these are early carcinomas. — H. R. SHERRILL, M.D. (Shelby North Carolina) in *South. Med. & Surg.*, Dec. 1945.

(CLINICAL MEDICINE will shortly publish illustrations indicating a simple office technic for anesthesia of the cervix—Ed.)

Editorial

Crime and the Human Mind

TO every doctor comes the call to pass judgment on criminals; sometimes from the families, sometimes from the courts. So, it was with pleasure that I discovered the other day a book on the subject of criminals and what makes them so. It is called *Crime and the Human Mind** and is written by Dr. David Abrahamsen, a Norwegian, with experience in London, and in various clinics in the United States.

The book is well written and when Freudian jargon is used, the context explains the meaning. (Unfortunately, his rather good discussion of ego, id, and superego, is away back on page 136.)

We have been told by our reforming friends that environment is the chief cause of crime. This book puts the matter in better perspective and shows that personality is the determining force. (Those of us who have read Richard Wright's *Black Boy* will remember it as a good illustration.)

And what is personality? "It is the total individual expressing himself through an organization of ingrained ideational, affective, and conative faculties and inclinations which determine his behavior and characteristics. Personality integrates the thinking, the willing, and the acting of the human being and represents the individual as a whole. We can say that the personality consists of four layers or levels. First, the anatomical or structural level, composed of the individual's skeleton, muscles, and organs. Second, the physiological level, which is concerned with the organs, their normal functioning, their interrelationship, and their ability to adjust to the needs of the personality. Third, the psychological level, which includes the ability to recognize, integrate, remember, and discriminate; in short, the mind of the individual. Fourth, the social level has reference to the person's behavior, whether he is successful or unsuccessful in adjusting to his environment or whether he must make some compromise.

*Columbia University Press, N. Y., 1944.

"Personality is then the dynamic unit; upon its functioning the pattern of the person's behavior depends."

Investigations beginning about 1890 led to the conclusion that no such thing as a criminal brain exists, (not to be confused with "state of mind." Ed.) So, also, Lombroso's criminal stigmata have proven unacceptable. It is now up to the doctors and psychiatrists to formulate the pathogenesis and therapy of crime.

In the chapter on juvenile offenders, it is pointed out that the family environment is paramount. Child guidance clinics are recommended, but only if sufficient psychiatric assistance is available. Since the family doctor is usually the first person consulted, and since child guidance clinics are growing in number and authority, it would be a matter of simple good sense for every physician to read this chapter.

Regarding punishment: the author would put the attempt to cure the criminal first—he would employ psychiatry, psychoanalysis, or even shock narcooses or lobotomy, before institutional punishment be restored to. This would involve prolonged study of each criminal (as under the Swiss law). Prostitutes and other sex offenders need primarily psychiatric examination and prescription, says Abrahamsen.

Retaliation and vengeance should no longer be the aim of the treatment, rather the aim should be the cure of twisted personalities, and the protection of society against the incurable.—G. H. HOXIE.

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The soul of man is immortal and its future is the future of a thing whose growth and splendor have no limit.

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"The Best Medical Care in the World"

This editorial cartoon represents the reaction of a number of physicians to present day medical care. They are not in favor of government medicine. They do wish to emphasize that all is

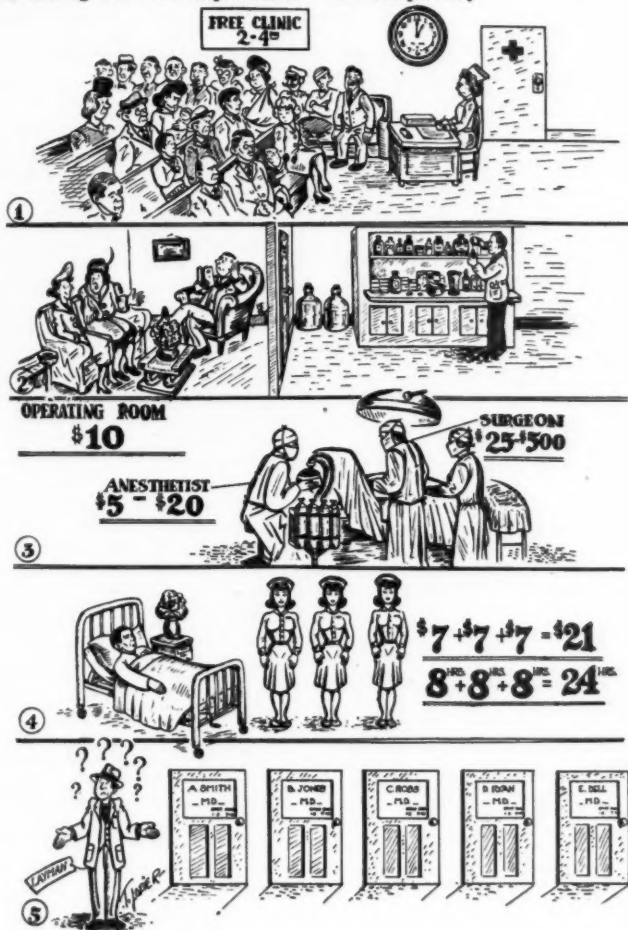
not sweetness and light, that improvements can be made.

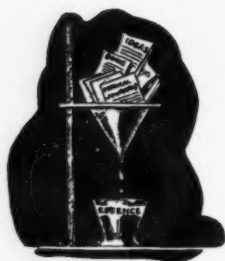
The free clinic sketch was inspired by a visit to a clinic in Cornell University Medical School (one of the newest, largest and most beautiful medical school-hospital buildings in New York City and the United States). Here again, were the familiar rows of benches and rows of patients, carefully scheduled to all be present early—note that the clock points to one, an hour before the clinic is to begin. And this in the booming times of 1946. How many thousands of patients in larger cities will be forced into clinics during the next depression?

Sketch number two is a familiar scene in many small towns, where the physician acts as his own dispenser of medicine. It is easier to reach for a bottle than to think up a logical prescription. Those physicians who practice in towns too small to support a competent, ethical pharmacist are doubly unfortunate.

Sketches three and four call attention again to high cost of medical, nursing and hospital care.

Sketch four represents the puzzled layman. He has "free choice of physician," true, but how can he tell which one studies, maintains his enthusiasm and his competency?





CLINICAL NOTES and ABSTRACTS

The Preventive and Therapeutic Use of Vitamins

Vitamin preparations may be supplementary or therapeutic. The supplementary preparations are those in which the recommended daily doses provide amounts of specific nutrients below therapeutic levels but sufficient to insure adequate intake of the specified nutrients.

The supplementary levels of vitamins are of use in helping to prevent diseases due to deficiency of the nutrients contained in the supplements and are prescribed on the following indications.

If one feels that the patient is not re-

ceiving a satisfactory diet, use a check list shown in Table III.

Treatment of Vitamin Deficiency

Successful treatment of nutritional deficiency involves many facts other than giving vitamins. It involves careful diagnosis, the treatment and whenever possible the elimination of conditioning factors, symptomatic treatment, and finally the administration of nutritional therapeutics in sufficient amounts and over a sufficient period of time to evoke maximum reversal of the nutritional lesion.

The diagnosis of deficiency disease is frequently missed because it is not looked for. Suspect nutritional deficiencies in:

1. Those whose diets indicate possible deficiencies.
2. Those who have conditioning factors known to increase the requirement, destruction or excretion of vitamins or to interfere with their digestion, absorption or utilization.

TABLE I

Supplementary Vitamin Mixtures

Ascorbic acid	30 - 100 mg.
Vitamin A.....	4,000 - 5,000 inter. units
Vitamin D.....	400 - 800 inter. units
Thiamine hydrochloride	1 - 3 mg.
Riboflavin	2 - 3 mg.
Niacin Omide	10 - 20 mg.

TABLE II

Indications for the Use of Supplementary Vitamin Formulas

1. To supplement:
 - (a) An unsatisfactory diet in the part of the general population that will not or cannot eat a satisfactory diet, or for those whose diets do not appear to be satisfactory.
 - (b) Restricted diets, as in obesity, diabetes, gallbladder disease, peptic ulcer and food allergy or during illness, infections or some surgical conditions and in convalescence.
 - (c) Special diets for food faddists.
 - (d) Infant feeding.
2. For persons known to have an increased vitamin requirement, as in hyperthyroidism, pregnancy, lactation, fevers and delirium or during periods of unusual physical exertion.

TABLE III

Check List for a Satisfactory Diet

Include at Least:

- (1) 4 eggs weekly.
- (2) 1 serving of citrus fruit, tomato or their juices, or fresh uncooked salad greens.
- (3) 1 quart of milk daily for children, with an extra source of vitamin D. 1 pint of milk daily or its equivalent in cheese, for adults.
- (4) 1 serving of lean meat, fish, poultry or seafood.
- (5) 1 serving daily of cooked leafy green or yellow vegetable.
- (6) 1 serving daily of another vegetable or fruit.
- (7) 1 portion daily of enriched or whole grain bread or cereal.

3. Those complaining of certain symptoms, which, while not diagnostic, are often associated with deficiency disease.

Adequate therapy of a deficiency disease, therefore, requires not only sufficient administration of the specific nutrient but also the restoration of tissue normal in all the essential nutrients. This can be accomplished by a judicious combination of diet, a source of the whole vitamin B complex, the essential vitamins (vitamin A, D, B1, B2, C and niacin amide) and specific therapy. A good diet is essential, for it contains along with known nutrients, unknown factors which cannot yet be encapsulated or dispensed in drops, ampules, or tablets.

The entire vitamin B complex is given, preferably in the form of brewers' yeast, brewers' yeast extracts or crude extracts of whole liver, liver concentrates, wheat germ, or rice-bran extracts.

A preparation containing large amounts of the fat and water soluble essential vitamins is essential. A practical formula is one containing vitamin A 25,000 units, vitamin D 1,000 units, thiamine 5 mg., riboflavin 5 mg., niacin amide 150 mgs. and ascorbic acid 150 mg. This formula should be given twice daily for a week or ten days and then given once daily.

To this basic therapy of diet, vitamin B complex and essential vitamins are added with specific chemicals indicated by the manifest nutritional diseases. If there are lesions of vitamin A deficiency, 50,000 units of vitamin A are given or 10 to 20 mg. or even 100 mg. of thiamine, 5 to 15 mg. of riboflavin, 100 to 1,000 mg. of niacin amide and 100 to 1,000 mg. of ascorbic acid are prescribed. In acute deficiency disease, this treatment may be required only for days or weeks; for chronic deficiency disease, treatment may be required for much longer periods. — NORMAN JOLLIFFE, M.D., in *J.A.M.A.*, Oct. 27, 1945.

Simplified White Cell Count

A simple method of computing the white blood cell count: Add the number of cells found in each of the four corners of the ruled area of the counting chamber together, divide by 2 and add two zeros.—W. FOWLER, M.D. in "*Hematology*" (Hoeber, Harper & Brothers).

Treatment of Asphyxia Neonatorum

Immediately after delivery suck out the air passages with a catheter. Then, with the aid of a good light, survey the baby carefully and determine his condition. If he does not breathe on mild peripheral stimulation but has a satisfactory circulation and is not unduly limp, the simple method of resuscitation should be sufficient. This consists of further suction, clamping and cutting the cord long (12 inches or more from the baby), injecting the umbilical vein with gr. 1/20 alpha-lobeline hydrochloride, stripping the drug slowly into the general circulation and after a few respiratory gasps the application of a mask to the baby's face supplying pure oxygen. The baby should be kept warm and after 5 or 10 minutes oxygen and carbon dioxide mixtures may be employed to deepen the respirations. If the baby is in desperate condition, with little apparent circulation, pallid and the tissues jellylike in consistency, a combined technique should be immediately employed:

The umbilical vein is injected and stripped to just short of the halfway mark. A clamp is applied here to prevent the blood from returning toward the site of injection. (So far the initiating substance has not entered the circulation but is in the blood of the cord ready for subsequent use.) Introduce a rubber catheter or, better, a rigid tube into the trachea by means of an infant laryngoscope. When a rigid tube is used, the baby should lie on a table with the head over the edge in hyperextension. Thorough suction of the larynx and trachea is performed. Insufflation of oxygen under intermittent pressure (5 to 12 mm. of mercury) is then started. Immediately afterwards, milk the initiating drug slowly into the circulation by further stripping of the cord, a sufficient amount being introduced to bring about a definite gasp and some subsequent respirations. The oxygenation of the blood quickly improves the circulation and also renders the respiratory center more sensitive. After the withdrawal of the catheter or tube an inhalator can be used advantageously to deepen and quicken the respirations. A mixture of oxygen (7%) and

carbon dioxide (93%) is effective for this purpose. It should be continued until the child is out of immediate danger. It is our opinion that this technique gives the best possible hope of saving desperate cases. — H. R. LITCHFIELD (Brooklyn) in *J. Pediat.*, March 1945.

The Pathologic Basis of Sudden Death

Cardiovascular disease is the outstanding cause of sudden death. For 361 consecutive cases due to natural causes, the Philadelphia Coroner's office found the following distribution of diagnoses:

1. Coronary artery disease178 cases
(with or without coronary thrombosis)
2. Hypertensive cardiovascular disease 47 cases
 - With heart failure27
 - With cerebral hemorrhage ..20
3. Infection 42 cases
 - Pneumonia37
 - Meningitis 5
4. Lesions of the aorta 33 cases
5. Alcoholism 20 cases
6. Cirrhosis of the liver 15 cases
7. Thymic hyperplasia 10 cases
8. Pulmonary embolism 7 cases
9. Perforated peptic ulcer 5 cases
10. Epilepsy 4 cases

Total361 cases

—B. A. GOULEY, M.D. in *Phil. Med.*, May 19, 1945.

Congenital Pancreatic Disease

Metabolic studies were made on the nature and content of the feces in congenital pancreatic deficiency, to determine the optimal diet for such patients. The total fecal excretion on a normal diet was found normal for 3 infants under 6 months but excessive for older infants and children. Characteristically the stools were formed, of normal appearance but had a distinctive odor "like stale marigolds." On normal diets the fat excretion was excessive with all patients, but decreased when the dietary fat was cut down. Giving pancreatin by mouth usually reduced both the fecal fat and the total bulk of the feces.

Ten balance studies were made on 2 patients. Increasing the fat in the diet, increased the excretion of protein, fat and ash. Corn oil (an unsaturated fat) and butter (a saturated fat) were equally well utilized. Adequate retention of protein was obtained only when the diets derived 21% or more of their calories from protein. Cereal starch proved to be better utilized than banana. With a celiac diet, 1 patient required 150 cal. per kilo. body wt. per day to maintain his weight, while the other gained on 100 cal. per kilo.

For patients with congenital pancreatic deficiency, the optimal diet is: Give 25% of its calories as protein; be low



in fat but include eggs and fat-soluble vitamins; provide much of its carbohydrate as sugar; furnish liberal amounts of cereal starches and potato, if clinically well tolerated, for patients beyond infancy. —D. H. ANDERSEN, in *Amer. J. Dis. Child.*, April 1945.

Caffeine and Peptic Ulcer

Recent studies indicate definitely that caffeine is harmful for individuals who have or have had peptic ulcers.

Judd injected guinea pigs and cats intramuscularly with caffeine contained in beeswax and thereby produced gastric ulcers, although no stimulation of gastric secretion nor ulcer production was observed from caffeine injection or ingestion in dogs with pavlov stomach pouches.

Roth and Ivy, by means of carefully controlled experiments, have shown that caffeine given either orally or intravenously markedly stimulates gastric secretion in man.

After a period of fasting, the stomach was emptied and the secretion of gastric juice determined every ten minutes for a half hour. Then 200 cc. of water with 250 mg. of sodium benzoate and 250 mg. of caffeine were introduced into the stomach and, after thirty minutes, the stomach was emptied and the volume and acid concentration determined every ten minutes until the secretory response had subsided and the basal level once again was reached. Similar tests were made with sodium benzoate alone and an ordinary test meal but the response to the caffeine was about two and a half times that of these controls.

The significant finding was the difference in acid secretion response in different individuals. In about 85 per cent of those given 250 mg. (3 3/4 grains) of caffeine (the equivalent of two cups of coffee), there was an abrupt rise in the total acid secretion lasting fifty to seventy minutes; 10 per cent showed a less amount of acid secreted with a return to the basal starting point in sixty to ninety minutes; about 5 per cent showed a still more prolonged response at a high level. All but one of 36 peptic ulcer patients showed a high and prolonged response.

The average response to tea, Postum,

and coffee with sugar and cream was about 60 per cent; Sanka 75 per cent and Coca-Cola 89 per cent that of clear coffee. These drinks, though low in caffeine content, all contain elements other than caffeine which stimulate stomach secretions.

The conclusion seems warranted that those who have or who have had peptic ulcers should not drink coffee, tea, or caffeine-containing drinks.—*New York S. J. M.*, August 1, 1945.

Delayed Labor Due to Uterine Contraction Ring

Delay in labor due to a uterine contraction ring is easily diagnosed by vaginal examination. The cervix is relaxed during a contraction instead of firm and tense. The ring is found 8 cm. above the external os, usually around the neck of the fetus.

Treatment: 1. Wait until the second stage of labor (till dilatation of the cervix) has lasted two hours.

2. Give 1 cc. adrenalin subcutaneously.
3. Give amyl nitrate by inhalation.
4. Deep ether anesthesia.
5. Incising the ring.
6. Caesarean section, if no question of infection.
7. Intravenous pentothal anesthesia.

—W. D. GALLOWAY, M.D., in *Med. World Lond.* April 27, 1945.

Exanthem Subitum

Exanthem subitum (roseola infantum, pseudorubella, exanthem criticum, rose rash of infants, sixth disease, et cetera) is a self-limited acute illness of infancy. An attack begins with fever for 3 to 5 days, followed by an erythematous eruption, macular or maculopapular, most marked on the trunk, neck and extremities. It is mildly contagious. Variations in signs and symptoms occur frequently. The prognosis is excellent; harm may result from misdiagnosing and overtreatment.

Most cases occurred during February, March, April, and October.

Symptomatic treatment: An adequate diet and intake of fluids should be maintained. If the diagnosis is strongly suspected in the pre-eruptive stage the treatment may be directed toward alleviation

of the fever and malaise, by aspirin and phenobarbital. Sponge baths have a soothing antipyretic effect when the fever is 103° F. and over. Medication with sulfathiazole or sulfadiazine neither relieves any of the symptoms nor alters the course of the illness. The pharyngitis, tonsillitis, and catarrhal otitis media occasionally present will clear just as quickly without the use of sulfonamides. —H. H. CLEMENS, M.D. (Marysville, Calif.), in *J. Pediat.* Jan. 1945.

Newborn Infants of Pre-Diabetic Mothers

Recent studies have shown striking changes in infants born to diabetic mothers. In addition to the increased body weight and hyperplasia of the islands of Langerhans, which have been recognized for many years, these infants sometimes have at birth cardiac hypertrophy and extramedullary erythropoiesis (red blood cell formation elsewhere than in the bone marrow), adrenal hyperplasia, an increased eosinophilia of the anterior hypophysis, and hyperplasia of the genital organs in the female.—H. C. MILLER, M.D., in *Amer. J. Med. Sci.*, Apr., 1945.

Ring Injuries

Simon and Alban in *Military Surgeon*, Dec. 1945, surveyed a random group of 1,000 soldiers of whom 688 wore rings and found that 24 (3.5%) of these had suffered a total of 26 ring injuries. Eleven other ring injuries requiring surgical at-

tention were treated. The most common mechanism of injury was the catching of the ring on a projection, such as a nail or bolt; other causes included crushing injuries in which the ring was forcibly pressed into the finger. Simple contusions, contused lacerations, severed or injured tendons, dislocated interphalangeal joint, fractured phalanx, avulsion of a finger and sprain occur. Injuries due to the constriction of a finger may occur in the presence of edema due to fractures, burns and systemic disease. Rings should not be worn when engaged in occupations where the hazard of ring injuries is increased.

Pain Relieving Agents

Under controlled conditions, common analgesics and their effectiveness in raising the pain threshold, (Relieving pain) are as follows:

¼ grain	morphine sulphate	70% above zero level
30 cc.	alcohol (95%) orally	45% above zero level
0.2 Gm. (5 gr.)	acetylsalicylic acid	35% above zero level
1 tube	trichlorethylene inhalation	40% above zero level
1½ gr.	Barbiturate	20% above zero level

Inhalations of 20% nitrous oxide are as effective in producing analgesia as 15 mg. (1/4 gr.) of morphine. Morphine produces less analgesia if given after the pain appears, then when given prophylactically. —A. WIKLER, M.D., in *Kentucky Med. J.*, Nov. 1945.



Penicillin: Use Large Doses!

Failures of penicillin therapy are due to:

1. Using small doses.
2. Using on wrong disease.
3. Stopping treatment too soon.
4. Failure to drain abscesses.

Small Doses: The first course of treatment should be the best. If you save penicillin and your patients money by giving small doses, the bacteria become resistant.

For example, Anderson et al in J.A.M.A., Oct. 5, 1945, report relapses in 47 percent of cases of chronic osteomyelitis, due to staphylococcus aureus, who received penicillin from the Boston group of original clinical workers with the antibiotic. Yet they suggest only 15,000 units intramuscularly every 3 hours.

Cases of gonorrhea are appearing in increasing numbers who have received from 50,000 to 75,000 units with no or temporary cessation of discharge. As penicillin tablets become more plentiful, no doubt we will see more cases, just as we are encountering more and more sulfa-resistant gonorrhea.

Uterine Inertia: Diagnosis, Treatment

Diagnosis: The uterus does not harden firmly with each pain, the contractions are short (5 to 15 seconds) without progress in labor, the pain complained of may be little or much.

If irregular, extremely rapid or very slow fetal heart beats are heard, asphyxia is beginning. If fever and fast pulse, foul discharge or edema and bleeding of the external genitalia occur, one should suspect infection or danger of ischemic necrosis; these are good criteria for termination of pregnancy.

Primary uterine inertia is characterized by weak contractions beginning at onset of labor in an otherwise normal case. In secondary uterine inertia, the contractions are vigorous at the start but become infrequent and ineffective, due to exhaustion, small bony pelvis, and so on.

Treatment of primary inertia: If the bony pelvis is ample, 1. the patient is kept up as much as possible, 2. a tight

abdominal binder is used, especially for patients with a pendulous abdomen, where the uterus is rotated or if patient is obese, 3. fluids are given freely (two to three thousand cc. by mouth, or intravenously, of 10 per cent glucose), 4. 3,000 calories daily, 5. a warm enema once in every 24 hours, immediately after a period of rest, 6. the bladder is carefully watched; catheterizations are carefully and frequently done if necessary), 7. eight to 12 hours of sleep should be obtained by using morphine, Nembutal and scopolamine, 8. no oxytocics are given (no pituitary extract), 9. oxygen by face mask for fetal distress, 10. moral support: Tell the patient and her family in understandable language what problems we are confronted with and then reassure her as frequently as necessary.

A sterile examination of the pelvis, pressure down to see if the baby's head will engage and an x-ray of the pelvis may be necessary to decide if vaginal delivery can be accomplished.

Bleeding after delivery is due to lacerations of cervix, vagina and perineum, atony of uterus or retention of placenta and membranes. Inspect the perineum, vagina and cervix with a good light; suture lacerations; massage the uterus vigorously and give 1 ampule of Ergonovine intravenously; catheterize the bladder; remove placental tissue from the uterus (after donning clean gloves). If bleeding persists, give blood as soon as possible; fluids and plasma may be used temporarily but only blood has any permanent value; pack the uterus and vagina thoroughly.—LEO HEYWOOD, M.D. in *Hawaii Med. J.*, Sept-Oct. 1945.

Danger in Lactic Acid

Concentrated lactic acid is not a weak acid, and should be handled as a caustic poison. The authors describe a one month old infant who died from esophageal stenosis 2 weeks after receiving by error a teaspoonful of lactic acid full strength (U.S.P. 87%) in place of elixir of phenobarbital. A number of similar fatalities are on record, resulting from errors in the preparation of lactic acid milk. Great care should be exercised in labeling and dispensing this acid.—J. B. TRAINER, M.D. et al (Portland Ore.) in *Am. J. Dis. Child.*, March 1945.



THUMBNAIL

THERAPEUTICS

Salicylate Administration

When administering large doses of salicylates (aspirin, methyl salicylate) for rheumatic fever or other conditions, one should give vitamin K to prevent hypoprothrombinemia and bleeding into the brain and all other organs.—C. T. ASHWORTH, M.D., in *J.A.M.A.*, Nov. 26, 1944

Penicillin for Gonorrhea

The intramuscular injection of 100,000 units of penicillin, repeated in four hours, cured ninety percent of male patients with gonorrhea. Failures need smaller doses, administered over a longer period of time.—C. J. VAN SLYKE, M.D., in *Ven. Dis. Inform.*, Jan. 1945

Vitamin A (Fish Oil) for Hypertension

Reduction in blood pressure often occurs following large doses of vitamin A, due to some constituent of the fish oils which are concentrated in commercial preparations of vitamin A. Such preparations closely resemble kidney extracts.—E. MASSIE, M.D., *Jour. Kansas Med. Soc.*, Dec., 1944.

Rheumatoid Arthritis and Penicillin

Rheumatoid arthritis does not respond to penicillin treatment, in doses of 1,800,000 to 3,250,000 units.—PHILIP HENCH, M.D., in *J.A.M.A.*, Nov., 1944

Penicillin for Urinary Infections

Streptococcus fecalis urinary infections do not respond to sulfonamide therapy. If kidney damage is present, mandelic acid cannot be excreted in bactericidal concentration. Penicillin is effective against these organisms.—H. F. HELMHOLTZ, M.D., in *Proc. Mayo Clinic*, Dec., 1944

Chancroid

The first lesion of chancroid is rarely on the skin, commonly on the mucosa of penis, vagina or cervix. The demonstration of the causative bacteria (*hemophilus ducreyi*) and a positive skin test for this disease are not adequate as the chancre of syphilis may occur simultaneously. The dark field examination should be repeated several times before syphilis can be excluded.

Sulfathiazole is rapidly curative but such therapy must be continued after clinical cure. Penicillin is effective also.—P. A. O'LEARY, M.D., in *Proc. Mayo Clinic*, March 7, 1945.

Benzedrine for Obesity

Obese patients taking benzedrine do not eat between meals or at bedtime and are more easily satisfied at meal times. A low calorie diet should be employed. The weight loss is not permanent, but transient, and weight returns when drug is stopped, unless the patient remains on his diet.—F. K. ATBRECHT, M.D., in *Ann. Internal Med.*, December, 1944.

Removing Oil and Tar

Liquid mineral oil petrolatum is the best remover of oil and tar from injured or burned surfaces.—J. M. SCHMOELE, M.D., in *Bull. Am. Col. Surg.*, June, 1944.

Stricture of Urethra

A malignancy of the urethra must be suspected in any stricture, irrespective of its apparent etiology, which does not respond to dilation and particularly if repeated dilations are accompanied with profuse urethral bleeding. Such an individual is entitled to a careful diagnostic study by a competent urologist.—*Am. Jour. Surg.*, March, 1945.

Vitamins for Normal Persons

The administration of vitamin supplements to a group of apparently normal people, consuming the usual American diet, had no demonstrable beneficial effect.—J. M. RUFFIN, M.D., in *J.A.M.A.*, Nov. 1944



DIAGNOSTIC POINTERS

Vomiting and Fever With Appendicitis

Vomiting is a relatively late symptom of appendicitis, is never severe and may never appear. Perforation may occur without vomiting.

There is no significant fever, or none at all, in early appendicitis. A high fever is often explained by a urinary infection.—W. H. COLE, M.D., in *Miss. Valley Medical Journal*, January, 1945.

Early Signs of Measles

The surest sign of measles is the continual running of the nose and eyes. The earliest rash of measles, small red spots, appear on the face and neck; resembling the bites of fleas. Broad, red elevated maculae appear on all parts of the body.—SYDENHAM. (17th Century).

Pyelitis Caused by Constipation

Recurring attacks of pyelitis may be caused by constipation. The correction of the constipation puts an end to the attacks of pyelitis.—H. L. KRETSCHMER, M. D., in *Rocky Mountain Medical Journal*, January, 1945.

Pain in the Right Lower Quadrant

In very chronic pain in the right lower quadrant of the abdomen, the appendix seldom is responsible.

Abdominal Distress

The commonest cause of abdominal distress is constipation.

Abdominal Rigidity

The commonest cause of abdominal rigidity is ticklishness.

Symptoms of Coronary Sclerosis

Arteriosclerosis of the coronary arteries may result in (1) irregular heart, (2) congestive heart failure, (3) angina pectoris and (4) coronary thrombosis. Any one, or all, may be present in the same patient at one time or another.—*South. Colo. Bull. Phys.*, March 7, 1945.

Hemoptysis in Lung Cancer

Hemoptysis frequently occurs in bronchogenic lung cancer and often is the symptom which causes the patient to consult a physician.—G. V. BRINDLEY, M. D., in *Med. Clin. No. Amer.*, Aug., 1944.

"Spider Marks"

Spider marks, due to enlarged blood vessels, in the skin of the face, trunk or occasionally arms and fingers, should make one suspect cirrhosis of the liver.—N. W. CHAIKIN, M.D., in *Am. J. Dig. Dis.*, February, 1945.

Sore Tongue

In the absence of pernicious anemia or sprue, sore tongue may be due to a deficiency of Vitamin B Complex, particularly nicotinic acid.—J. W. RUFFIN, M. D., (Duke University, Durham, N.C.) in *South. M. J.*, Feb., 1945.

Fractured Rib

In strapping the chest for fractured rib: The straps should pass well beyond the median line. They should be applied in full expiration. One or two straps passed over the shoulder help much to immobilize.—*South Med. & Surg.*, Feb. 1945.

Indigestion and Heartburn

Smoking is a common cause of indigestion and pyrosis (heartburn). Symptoms of duodenal ulcer often disappear when smoking is stopped.—A. H. STEINHAUS, Ph.D., in "Tobacco and Health" (Y.M.C.A. Press).

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE**, Waukegan, Ill., is accompanied by a check for the published price of the book.

PUBLIC MEDICAL CARE, PRINCIPLES AND PROBLEMS

Goldman

PUBLIC MEDICAL CARE, PRINCIPLES AND PROBLEMS—By Franz Goldman, M.D., Columbia University Press, 1945, Price \$2.75.

Today, when the majority of physicians consider any subject matter pertaining to medical welfare as "Socialized Medicine" and when current articles on the social and economic aspects of medical care are only too frequently highly prejudiced diatribes for, or against, this same "socialized medicine," it is as refreshing as it is revealing to read a factual and objective review of the sociological aspects of public medical care. This concise volume, with its ample bibliography, will serve as a source book for those who are interested in medical economics.

Each phase of public medical care is introduced with an informal description of the historical development of that particular facility and modern developments in public hospitals, treatment clinics, preventive clinics, private group clinics, care for "persons in need" and in the administration of public medical care. Utilizing the facts obtained from the experiences of the past and the present, the author discusses in detail the planning for the future in each of these categories.

This authoritative volume is introduced with the paragraph "Adequate medical care is a fundamental human right. It is as much a necessity of life as food, shelter, clothing, or education. It is no less indispensable to the well-being of society than to the welfare of the individual. It is an essential component of any program for individual and social security." With this premise very few physicians will find fault. If we conclude that, to reach an ideal satisfaction of this premise, more and more medical services must and will be provided by governmental agencies by financing through taxation or social insurance, it will come as no great surprise to those who have witnessed the trends of medical economics during the past decade. However, without criticism of the facts or the conclusions in this excellent monograph, the question which appeals to the protagonist of private medical practice is, "If medical care is to be provided through taxation or insurance, why should not food, shelter, clothing, and the education of the people of the world also be provided by the same means and by the same token of need?"—C.D.M., M.D.

THE MARIHUANA PROBLEM IN THE CITY OF NEW YORK

Mayor's Committee

THE MARIHUANA PROBLEM IN THE CITY OF NEW YORK: Sociological, Medical and Pharmacological Studies By the Mayor's Committee on Marihuana. The Jacques Cattell Press. Price \$2.50.

This report was begun primarily as an effort to ascertain the seriousness and extent of marihuana abuse in New York City. The necessity, however, of making medical, psychiatric and pharmacological inquiries became apparent, since this is a police or sociological problem which can only be accurately evaluated by a penetrating scientific analysis.

The main content of the findings is to the effect that marihuana smoking is reasonably common among some groups of Latin Americans and negroes in Harlem but that it is not directly provocative of crime, sex assaults or serious drug addiction. Psychological studies with about 48 characters, who gave histories of marihuana use, did not indicate permanent mental deterioration due to use of the drug.

The acute effects observed with these and other subjects were in line with previous observations, the control by laboratory methods usually being somewhat more rigidly applied here than in previous studies.

(Other reviewers feel that the human subjects studied were not allowed free expression, as they were confined and not able to carry out their desires, normal or abnormal.—Ed.)

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FIRST AID, SURGICAL AND MEDICAL

Cole and Puestow

FIRST AID, SURGICAL AND MEDICAL (Third Edition). By Warren H. Cole, M.D., F.A.C.S., Professor and Head of the Department of Surgery, University of Illinois College of Medicine, Chicago, Ill., and Colonel Charles B. Puestow, Medical Corps of the U. S. Army, D. Appleton Century Company, Inc. New York, 1945, Price \$3.00.

As the title of the book implies, this treatise is an excellent first aid manual, and would be valuable to students of medicine and to practitioners. Not only are the civilian emergencies handled very well but also military emergencies such as gas poisoning are excellently treated. The book is profusely illustrated with simple drawings which demonstrate the points admirably.—A. O., M.D.

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BACILLARY DYSENTERY

BACILLARY DYSENTERY COLITIS AND ENTERITIS. By Joseph Felson, B.A., M.D., Director of Medical Research, Bronx Hospital, New York. W. B. Saunders Company, 1945. Price \$6.00.

As thousands of servicemen return from bouts of bacillary dysentery, the alert physician should be prepared to diagnose and treat them. The author has compressed epidemiology, clinical aspects, bacteriology, pathologic lesions (including his beautiful correlation of the sigmoidoscopic view with clinical disease, as previously published in *CLINICAL MEDICINE*) and treatment of bacillary dysentery, chronic distal ileitis and chronic ulcerative colitis, into a small, handy, well-printed volume. His comments are sane and well balanced, especially in the disputed field of ulcerative colitis.

Disinfection and Sterilization

By Ernest G. McCulloch, M.A., D.V.M., Ph.D., Professor of Bacteriology and Parasitology at the State College of Washington; and Research Veterinarian in the Agricultural Experiment Station of the State College of Washington. Lea & Febiger, 1946. Price \$6.50.

This is a thorough and excellent text and reference book, and an abundance of charts, tables, and illustrations contribute to its readability. There are chapters on sterilization by means of pasteurization, canning, heat, cold, desiccation, electricity, filtration, and radiant energy. The phenol coefficient with its merits and shortcomings receives detailed discussion. The various chemical bacteriological agents are also evaluated—acids, alkalis, metals and their salts, dyes, phenols and creosols, alcohols and related products, iodine, chlorine, soap and the sulfa drugs. Of special interest to physicians are the discussions of disinfection of surgical instruments, sutures, food equipment, body excreta, and skin surfaces in the operating room. The final chapters deal with water purification, sewage disposal and air hygiene.

The author points out that steam will not penetrate cellophane. Yet, in the Reviewer's experience, many hospitals process their hypodermic needles in the autoclave at 17-20 lb. steam pressure (120°-130°C.) for 30 minutes, the needles lying inside test tubes capped with cellophane fastened by a rubber band. The sterilizing heat is thus "dry" and of a degree not usually deemed adequate to kill sporebearers. Although needles so treated always seem sterile when cultured aerobically and anaerobically, this routine of procedure evidently involves some slight risk; it would seem safer to package the needles in glass tubes plugged loosely with cotton.

This book is recommended to physicians, bacteriologists, and public health officials. It should stand on the reference shelf of all laboratories whose work involves sterilization and disinfection.

Hay Fever Plants

By Roger P. Wodehouse, Ph.D. Associate Director of Research in Allergy, Lederle Laboratories, Pearl River, N.Y.—*Chronica Botanica* Co. 1945. \$4.75.

The author's purpose is "to interpret the botanical facts of hay fever in terms of their clinical significance." The treatment is strictly technical only in the important matters of nomenclature and classification.

This book is of great value to the allergist. The description and details of the pollens and plants are invaluable. Two-thirds of the book is devoted to fundamental botanical considerations of pollen allergy and to the author's general conclusions regarding the role of particular families and species. In the last part of the book these considerations are applied locally.

It is a complete book-length discussion of out-door problems of inhalant allergy.—A.C.C., M.D.

Morris' Human Anatomy

(A Complete, Systematic Treatise)
Edited By J. Parsons Schaeffer, M.D., Professor of Anatomy, Jefferson Medical College. Tenth Edition. Blakiston Press, 1944 (10th Ed.). \$12.00.

A beautifully printed book, the illustrations are well done in black and white and many are in colors; the text is printed in large, readable type, and bound in Blakiston's water resisting, cleanable covers.

A noted list of anatomists contribute their respective essays in selected fields. Scammon's section on developmental anatomy contains many unusual illustrations correlating the structure of the fetus, the infant and the adult.

Students and teachers like the book because it is not "wordy" yet gives sufficient information for clear understanding.

The Yearbook of Psychoanalysis

Managing Editor, Sandor Lorand, M.D., New York. International Universities Press, Vol. I, 1945. \$10.00.

This first volume of the Yearbook of Psychoanalysis is impressive in size as well as in the wide variety of subjects discussed by nationally famous psychoanalysts. The contents were selected especially to appeal to physicians, psychologists, anthropologists, and laymen. Less than half the chapters, however, can be readily understood by these readers, except by psychiatrists themselves.

The chapters on Homosexuality, Day Dreams, Symbols, Schizophrenia, The Accepted Lie, and War Neurosis are particularly easily read and valuable. A nice book, but hopefully subsequent Yearbooks will contain more articles that can be of interest to the general reader.—F. S., Psychiatrist.

Handbook of the Lying-in Hospital

Woman's Clinic of the New York Hospital, New York City. 1944. \$2.00.

This handbook outlines the routine procedures and technics specified in the Woman's Clinic of the New York Hospital. Exact details are given of the technic of delivering a normal primipara and multigravida, use of local anesthesia, proper diets, various routines for securing proper laboratory specimens and so on, as well as the usual instructions to students, interns and residents.

Atlas of Surgical Approaches to Bones and Joints

By Toufick Nicola, M.D., Professor of Orthopedics, New York Polyclinic Postgraduate Hospital, New York City. The MacMillan Company, 1945. \$5.00.

Hundreds of clear illustrations depict the safest, simplest approach to every bone and joint in the body, from the skin incision down to the structure desired. Such a book never goes out of date, as it is based on anatomy rather than on changing fads of technic.

Microbes That Cripple

By Arthur Turner. Written and Illustrated under the direction of Edward L. Compere, M.D., The National Society for Crippled Children, Inc., 1944, \$2.50.

Here is another excellent book for the intelligent layman, in which are described a variety of matters of general interest in bacteriology, parasitology, chemotherapy, and public hygiene. Anecdotes and an easy conversational tone, but not patronizing make the text very readable. There are many illustrations, entertaining and informative. Many of the points are so cleverly expressed that they can be adopted and repeated to families when discussing crippling diseases with them.

Though sponsored by the national Society for Crippled Children, this book is not a propaganda piece. Its purpose is to inform and interest the citizenry in sanitation and community health. Popular education of this sort should receive every encouragement from physicians.—I. W., M.D.

"The Trials and Triumphs of the Surgeon"

And Other Literary Gems.

By J. Chalmers DaCosta, M.D., Edited by Frederick E. Keller, M.D. Dorrance and Company, 1944. \$5.00.

J. Chalmers DaCosta was an accomplished surgeon, a keen student of surgical and medical progress. He was also a brilliant speaker and author. The recent publication of all his non-technical writing is a notable event.

His witty style covers a penetrating mind, a hatred of sham and a tremendous love for his profession. His aphorisms present much wisdom in small space: "Tact is a valuable attribute in gaining practice. It consists in telling a squint-eyed man that he has a fine, firm chin." "There is a splendid chance to do good in surgery, especially if you don't care who gets the credit." "There are fashions in surgery just there are in morals, millinery, religion and war boats. They are just as transitory and just as bizarre." "The public has an idea that a consultation is a meeting of accomplices."

Remarks on physicians of the past, strong arguments to use against the antivivisectionists, stimulating addresses to various medical groups, show a wide range of original thought. It is a good book for evening reading.

Penicillin Therapy

By John A. Kolmer, M.D., F.A.C.P., Professor of Medicine, Temple University, Philadelphia—D. Appleton-Century Company, Inc. 1945. \$5.00.

This monograph is written for the medical and dental professions, to provide the properties, methods of administration and possible therapeutic applications of penicillin, tyrothricin and other antibiotics. The literature is well abstracted. The book can be recommended for those who have not had the opportunity of following the literature and using penicillin clinically.

Physician's Daily Record

Published by Kersten Publishing Company, 1946. \$6.00.

This is one of the best physician's daily account books available. It is easy to keep up by noting the patient's names as they come in the office. The monthly financial summary sheets, inoculation, surgical and narcotic pages are of blue paper so that they may be found readily. At the end of the volume are to be found, many pages for obstetrical summary record, notifiable diseases, payroll record and annual financial summary. Clear instructions tell how to use the simplified record, how to balance books and checks and keep the records businesslike.

Men Under Stress

By Roy R. Grinker, Lt. Col., M.C., and John P. Spiegel, Major M.C., Army Air Forces. Blakiston Press, 1945. \$5.00.

This volume describes the reactions of men to the stress of aerial combat. These reactions differ quantitatively, but not qualitatively from the reactions of men in other branches of service to the combat stress of ground duty. The text may be adapted to the study of all military psychiatric problems. The chapters on therapy, particularly those which describe the technique of and experience with narcosynthesis, are particularly valuable.

"Men Under Stress" should be read by all medical officers serving with the air force and by tactical officers responsible for flying personnel. It will be a valuable addition to the library of those physicians in civil life who will treat ex-service men. The manner of presentation and the terminology is sufficiently unpretentious as to be understandable to persons with a minimum of training in psychiatry. In brief, the book represents a classic in the field of modern pragmatic psychiatry.—C.D.

Surgical Treatment of the Motor-Skeletal System

Edited by Frederic W. Bancroft, M.D., Assoc. Clin. Prof. Surg., Columbia University, New York City. J. B. Lippincott Co., 1945. (2 volumes). \$20.00.

Volume I: Deformities, paralysis, muscles, tendons, bursa, new growths, bone and joints. These topics are presented in full detail by text and good illustrations.

Volume II: Fractures, dislocations, sprains, muscle and tendon injuries, birth injuries and military surgery comprise the second beautiful volume.

A number of eminent authorities have contributed sections on subjects that they have studied. The material has been reviewed by the editor, giving continuity of thought and cross references. "All procedures, operative and nonoperative, utilized in the care of individual conditions are included. . . The text is designed for the average general surgeon and orthopedic surgeon over the country and large who has to do with lesions involving the motor-skeletal system." It is the most logical, modern and practical text in the field.

Global Epidemiology

(A Geography of Disease and Sanitation)

By James Stevens Simmons, M.D., et al.—

J. B. Lippincott Co., 1945. \$7.00.

Brigadier General Simmons and his staff of the Preventive Medicine Service of the United States Army have assembled a storehouse of information concerning sanitary conditions in the Far East and the Pacific area.

This is the first volume of a series which will presumably cover the entire world. The information must have been assembled under great pressure and one may expect that some revisions and additions will appear in subsequent editions but as it stands, it is an astonishing performance. Each area surveyed lists information grouped under the following headings: Geography and climate, health services, water supplies, sewage disposal, insects and animals, food and dairy products, medical facilities, and indigenous diseases with a discussion of their modes of transmission.

Part I is devoted to India and such other Far Eastern places as Burma, Ceylon, China, Formosa, French Indo-China, Japan, Korea, British Malaya and Thailand; Part II covers Australia and the Pacific islands.

This reviewer is unable to evaluate the accuracy of the statistics presented but he is tremendously impressed with the wealth of information offered and the precise manner in which it is presented.

Bibliographies are attached to each section, and the book is profusely illustrated with maps. There is a satisfactory index, and the format is pleasing. The book is an important contribution to many fields of science and sociology.—T.F., M.D.

The Neurologist's Point of View

(Essays on Psychiatric and Other Subjects)

By I. S. Wechsler, M.D., Clinical Professor

of Neurology, Columbia University School of Medicine.—L. B. Fischer. 1945. \$3.00.

Here are a group of essays, written by a famous neurologist, which discuss, predominantly, the Jew and his problems. The author believes that anti-Semitism is a very complicated neurosis, a mass aberration. I wish that he would ponder on the following story told by a physician in military service: "I grew up in a small town in the middle west, without paying any special attention to the several Jewish families living in town. If I remember correctly, one of the girls was especially pretty and I danced with her. . . I went to medical school, to find that the seats on the front row were always grabbed, that I was elbowed here and elbowed there, that the study room echoed to the loud talking, that the ones I liked and invited to my room often brought along others. . . So much for that, as I have practiced since then in a small community where only three such families lived. . . On being called into service, our children, aged 9 and 12, were not prejudiced and knew so little about races, that when, in Brooklyn, the teacher asked if they were gentile or Jewish, they did not know what the terms meant. These children

might serve as a fair experiment, because they knew nothing of the history of races, had no "mass neuroses" or other predisposing factors. Within a month they knew that they had to fight their way into the school bus, that they could not trust their playmates to keep a fair score, were disgusted with the endless loud talking and bickering between the children, between parents and children and between parents. . . Fair play was often spoken of, but was little practiced. Your business was their business, and their business was their own. If they failed to beat you by a smart bit of trickery, so what, we could still be friends, couldn't we?"

His appraisal of Freud and his work is very fair. The development of psychiatry is brief but interestingly sketched.

The Embryology of Behavior

(The Beginnings of the Human Mind)

By Arnold Gesell, M.D., Ph.D., Sc.D., in

Collaboration with Catherine S. Amatruda,

M.D., New York—Harper & Brothers,

1945. Price, \$5.00.

Dr. Gesell has now turned his technical armamentarium and alert wisdom to the human fetus. Drawing upon embryology, neurology, comparative anatomy and practical pediatrics, he has produced a fascinating exposition of reactions and behavior in this hitherto least explored period of our development.

The fundamental thesis is that the anatomical and physiological growth of nerve, muscle and other tissues of the embryo forms the basis for a "lawful sequence" of progressively more intricate reaction patterns. "The body grows: behavior grows." Special emphasis is given to muscle tonus, to intra-uterine movements including pre-respiratory breathing behavior, and to the sleep-wakefulness rhythms. An abundance of diagrams and photographs in series illustrate the argument. The book is written with imagination and vision. It furnishes the key for understanding the movements and responses of premature infants, and is especially recommended to pediatricians and obstetricians.—I.J.W., M.D.

Rypin's Medical Licensure Examinations

Revised under editorial direction of Walter L. Bierring, M. D., F.A.C.P., Member National Board of Medical Examiners. Published by J. B. Lippincott Company, 1945 (5th Ed.). Price \$6.00.

It is a rather general treatise or digest in the field of medicine. The questions are not too extensive, but cover fairly well the general information.

The questions on anatomy are probably the best (exclusive of the entire field); better than are the questions on physiology and medicine.

It must not be overlooked that the book represents the experience of one of the most widely known physicians in the country, and it would seem, therefore, that it is a very good book to be used in the preparation for medical licensure examinations.—W.B.K., M.D.



Let your HEAD take you

(The average American today has a choice of just going where "his feet take him", or choosing wisely the course to follow. Let's skip ahead 10 years, and take a look at John Jones—and listen to him . . .)

"SOMETIMES I feel so good it almost scares me. "This house—I wouldn't swap a shingle off its roof for any other house on earth. This little valley, with the pond down in the hollow at the back, is the spot I like best in all the world.

"And they're mine. I own 'em. Nobody can take 'em away from me.

"I've got a little money coming in, regularly. Not much—but enough. And I tell you, when you can go to bed every night with nothing on your mind except the fun you're going to have tomorrow—that's as near Heaven as man gets on this earth! "

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"Back in '46—that was right after the war and sometimes the going wasn't too easy—I needed cash. Taxes were tough, and then Ellen got sick.

Like almost everybody else, I was buying Bonds through the Payroll Plan—and I figured on cashing some of them in. But sick as she was, it was Ellen who talked me out of it.

"Don't do it, John!" she said. "Please don't! For the first time in our lives, we're really saving money. It's wonderful to know that every single payday we have more money put aside! John, if we can only keep up this saving, think what it can mean! Maybe some day you won't have to work. Maybe we can own a home. And oh, how good it would feel to know that we need never worry about money when we're old!"

"Well, even after she got better, I stayed away from the weekly poker game—quit dropping a little cash at the hot spots now and then—gave up some of the things a man feels he has a right to. We didn't have as much fun for a while but we paid our taxes and the doctor and—we didn't touch the Bonds.

"What's more, we kept right on putting our extra cash into U. S. Savings Bonds. And the pay-off is making the world a pretty swell place today!"

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